THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

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DEMOCRACY AND ARCHITECTURE.

HAVE we any sufficient reason for assuming that the growth of democracy and the development of architecture are compatible with one another, that any great art has even been produced by the people and for the people, or that the people have ever had a real appreciation of great architecture?

The architecture of ancient civilisations was pre-eminently the art of kings, priests, and rulers, to the production of which the people contributed their toil, and in many cases their lives, and it would be interesting to speculate how far the stupendous monuments of Egypt and Assyria had for their primary object the intention of marking the subjection of the people, and how far they contributed to the artistic satisfaction of rulers, as apart from their love of pageantry and power.

The art of Greece was the gainer by the fact that its field was, judged by modern or Renaissance standards, a limited one, and we are more inclined now to put down the less pleasing features of Roman architecture to the initial difficulty of satisfying more complex wants than those of Greece than to wholly inferior artistic powers, apart from the fact that we are disposed to lay greater stress on the Hellenistic sources of inspiration in Roman architecture than was formerly the case. For the Romans solved problems which were similar to those of the modern world in their complexity and careful regard for practical requirements. It might almost be suggested that, had Greek art had a longer history through the maintenance of Greece as an independent State, it would have been held in less esteem to-day, because the problems of a more complex civilisation are not so capable of satisfactory artistic solution as were those of Athens in the era of Pericles and Phidias. In any case democracy as it was known in Athens had little that is comparable with that of modern States like England and France. Rome as a great building power was a despotism, for we have few remains which date back to the days of the kings and the Republic which followed them, and Imperial Rome, with its architectural majesty, was the creation of rulers and governors, and not of the governed. Mediæval communities, free as they appear to have been by comparison with the great Oriental and Roman Empires which preceded them, were not democracies in the modern sense; the prevalence of feudal customs, the existence of sumptuary laws, the fines and penalties for interfering with game are all alien and opposed to democratic principles as understood to-day. The position held by the Church in the Middle Ages would have been an impossible one in a democratic age, and in the freest of mediæval communities the leaders of the people were usually the aristocracy. And, wonderful as the achievements of the mediæval builders were, it may be questioned whether the system of glorified construction to which we give the title Gothic can be held to be architecture in the same sense as the styles which had preceded it. If we could once put aside mental association and the glamour lent by historical association, should we be disposed to say that the architecture of the Middle Ages equalled either what had gone before or what was to follow it? A great mediæval cathedral must needs be impressive because of its size and its antiquity and because it is so closely wedded by association with the past; but it is questionable whether many of our mediæval buildings are instinct with beauty to the same degree as the architecture of other periods. We have to use the term "picturesque" frequently because no other word so well expresses our sense of the qualities we find in mediæval building. Of grandeur as apart from uncouthness there is frequently little; the constant use of the grotesque for the first time in the history of artistic development is a dominant feature of mediæval architecture which, unless it was employed in the structure of a great church in which the necessary elements of vault, arch, and buttress were used in the one and only way possible, is apt to express itself in terms of detail with little regard to mass and proportion.

And the Gothic architecture of Western Europe is perhaps the nearest approach we have to the architecture of democracies until we come to modern times, and the monuments of the Low Countries and of Scandinavia are typical of what has been produced by the more democratic States in the past; and, interesting as that architecture is, it entirely fails to rise to the possible heights of noble building.

The more centralised power of the rulers of France was reflected in the greatness of the buildings erected by them, and without the policy which led step by step to the Revolution Western Europe would have lost its greatest architectural monuments. Had the Stuarts been successful in establishing a despotism in this country, the people would have been poorer and less happy, but it is possible that the tale of English architecture might have been enriched by works which could compare with the great architectural achievements of Louis-Quatorze. The best work of the eighteenth century in England is due to the patronage of the aristocracy and not the spontaneous artistic instincts of the people, and it is possible that the best modern work of France, under the Third Republic, represents the dying flame of an inspiration handed down from a period of centralised power and aristocracy.

The growth of Italian art in the Middle Ages and Renaissance is coincident with the establishment of tyrannies in her free cities—the Medicis, Estes, Ludovico Sforza, and many others who might be named, including the Great Popes of the Renaissance, destroyed liberty and erected eternal monuments to the arts, while despotic Spain gathered in her lap the wealth of the new world and built noble cities over a conquered continent.

We have as yet no definite reason to think that democracies in the modern sense will ever succeed in producing great architecture; we ill replace Ludovico de Medici with the corporation of a provincial town, yet that is what modern civilisation and progress have done for the world. We may educate the people, but unless the few who alone have love and understanding of art have also power and opportunity art may go a-begging.

We may increase our standard of comfort, we may make our habitations more sanitary, we may even abolish disease and increase the term of human life, for all these things are objects which those having power in democratic States will value; but unless, as has been suggested, the wheel of history produces in due season from the plutocracy an aristocracy having the power it had in the civilisations of the past, the art of architecture may suffer by the absence of the great art patrons, who would seem to have no place in the democracies of the future and who are almost eliminated now.

America may be quoted as an example in disproof of the contention we are putting forward, but it should be remembered that the American Constitution was, according to one of the greatest critics, largely inspired by a determination to guard the State from the dangers arising out of popular Government, and in the century of its existence what has been chiefly remarkable is the establishment of a plutocratic class who control all its industries and who exercise the real functions of Government, despite an apparently democratic constitution.

And when a plutocracy produces, as in America, men like Pierpont Morgan, who are great art critics and connoisseurs, devoting their wealth and leisure to building and other of the arts, a position is created which is analogous to the former conditions under which art has flourished. An American millionaire may build a palace as severely simple as the Pitti, which is taken by the ignorant as a standard and example, and so the people accept blindly that which their own inclinations would never initiate. The architecture of America arises out of the desire to attain to the standard of taste demanded by a small class of immensely wealthy and cultured men: the architecture of this country is in too many cases dictated by the necessity to satisfy the love of display possessed by public bodies and others who have neither knowledge nor taste.

NOTES.

The Architecture of Belgium.

APPROPRIATELY enough, the yearly architectural lectures held at University College, under the auspices of the Carpenters' Company, are this year to take the form of a course of six discourses on "The Architecture of Belgian Towns." The first of these took place on March 4, when M. Victor Horta, Director of the Royal Academy of Fine Arts at Brussels, spoke on "Architecture in Belgium since 1840." As a matter of fact M. Horta devoted a large part of his paper to the general influences affecting the growth of both town and architecture in his native country. As far as building materials are concerned, the southern provinces of the country are so rich in stones of many colours and beautiful marbles that big nations might well envy them. In the north, in the flat country, these materials are rare, but there is no lack of brick earth. Turning to the subject of the lay-out of the towns, the lecturer considered three types. First, those with streets radiating from one centre, such as Malines and Brussels, though in the latter the modern tendency to imitate Paris has rather obscured the original plan. Secondly, he took those towns which have streets running parallel to each other and, usually, a big water-way, such as Antwerp and Maestricht. In the third type he embodied towns laid out around various important points or roads. Brussels, Antwerp, and Ghent, which have expanded very much, have at times been sadly reconstructed. Ghent particularly needed knowing well before one realised its never-ending charms. Ypres, on the other hand, had been content to remain the beautiful old town it had been. The lecturer illustrated by means of several slides of houses in Ypres, Ghent, Tournai, Liége, and Bruges how the Walloons preferred the gable to the cornice. In fact some architects held that the blue limestone was not suitable to classical profile. Proceeding to describe the characteristic features in the evolution of architectural schools during the last seventy-five years, he remarked that in the early part of the nineteenth century there appeared to be a revolution in their architecture. Three different schools started, the Classic revival, the Gothic revival, and the "Neo-almost-everything." He illustrated each school and particularly drew attention to the fine classical front of the Palais des Beaux-Arts at Brussels. M. Horta concluded with a prediction that destroyed Belgium would be fittingly rebuilt, and that the necessary funds could be obtained in some way or other from the aggressor. We think that in reference to planning out Belgium s future it would be more dignified to wait until the country is free from the German yoke.

St. Martin's-le-Grand and Roman Remains.

MR. F. LAMBERT, Assistant-Curator, Guildhall Museum, has made a collection of the many interesting relics of the Roman period that were found during the excavation of the site of the (old) General Post Office in the winter of 1913-14. The greater part of them are of 100-150, Christian era, whilst those dug up at the south end are of an earlier period than those discovered nearer to Aldersgate. They comprise the head of a statue of Venus, a mould for making clay medallions, a Jewish coin struck in Palestine in the interval 132-5, A.D., a gold ring bearing the initials "Q. D. D.," and an intaglio seal engraved with the device of an eagle and a hare. The site, of which the north side lies but a few yards within the line of the City wall, is one of the most important of those associated with the Roman occupation of London, as previous discoveries have testified. The altar of Diana Venatrix was found, 15 ft. below the surface, in excavating for the new Goldsmiths' Hall, in Foster-lane, 1832-5. The site is notable also for the magnificent collegiate church of St. Martin, of which Henry VII. bestowed the deanery upon the abbots of Westminster. The church was founded, reputedly, by Wightred, King of Kent in 694-725; Ingelric (or Edward) Earl of Essex went into retreat there after the battle of Hastings, and with his brother Girard richly endowed the church for canons secular. In 1068 they obtained from William I. a confirmatory charter, with privileges of sanctuary, and Ingelric became the first dean. Within the precincts of the collegiate church stood the St. Leonard's parish church (on the west side of Foster-lane), founded in about 1236; the precincts and the parish were co-terminous. William of Wykeham, when dean, rebuilt the chapter-house and nearly all the church, whose crypt was found in the cellars of the Queen's Head tavern when the site was cleared, 1818, for Sir R. Smirke's building; deeper down were discovered abundant Roman remains. The foundation shared the fate of religious houses *temp.* Henry VIII., and by the Act of Chantries, 1 Edward VI., St. Martin's-le-Grand passed to the Crown. But another Alsatia arose on the site; the rights of sanctuary continued until about 1625, and the precincts formed a favourite resort of "strangers," who traded immune from interference on the part of the City authorities, and were famed for the excellence of their wares—notably of the "St. Martin's" and "Boul" lace in copper filagree. For the Post Office (1829-1913) were pulled down 150 houses standing in several courts and alleys. There are views of the crypt and other remains of the church, by Girtin, Allom, Buckler, and Schnebbelie, in the Guildhall and Crace Collections, and in the *Gentleman's Magazine*, November, 1818. The vaulted cellars of the "Mourning Bush" (latterly the New Post Office) coffee-house, near the Alders Gate, were built up with tile and other material of the adjacent Roman wall.

Restrictions on Sketching.

WITH the near approach of spring the young architect's fancy lightly turns to thoughts of outdoor sketching and that delightful study of the ancient examples of his art which is so essential a part of his education. It can hardly be said, however, that present conditions are exactly favourable to the pursuit of this branch of his studies. In fact, his prospects for the coming summer season are distinctly gloomy. Sketching and measuring on the Continent for some time to come is evidently out of the question, even if anything worth sketching is left standing, and in this country, where, at any rate, it should be possible, military authority appears to view the practice with suspicion. Considering that the German spy is supposed to be addicted to the sketching habit, this suspicion is not to be wondered at. All the same, it should be possible to discriminate between a spy and a properly accredited student of architecture, and it does seem a pity that the latter should be deprived of his sketching. If the Government thinks it advisable to continue the present restrictions till the war is over, it might be worth while considering whether some method could be devised, by means, say, of special permits, to prevent these restrictions interfering with legitimate architectural research. Proposals to this effect emanating from the proper quarter should meet with sympathetic consideration from the Board of Education, which would realise that all students unable to enlist can best serve their country by completing their education, provided this can be done without prejudicing the safety of the country. We heard of a case recently in which a lady who was making a series of drawings of old town gateways was subjected to as much supervision at Berwick-on-Tweed as she would have been within the fortress of Metz!

Telephones and Planning.

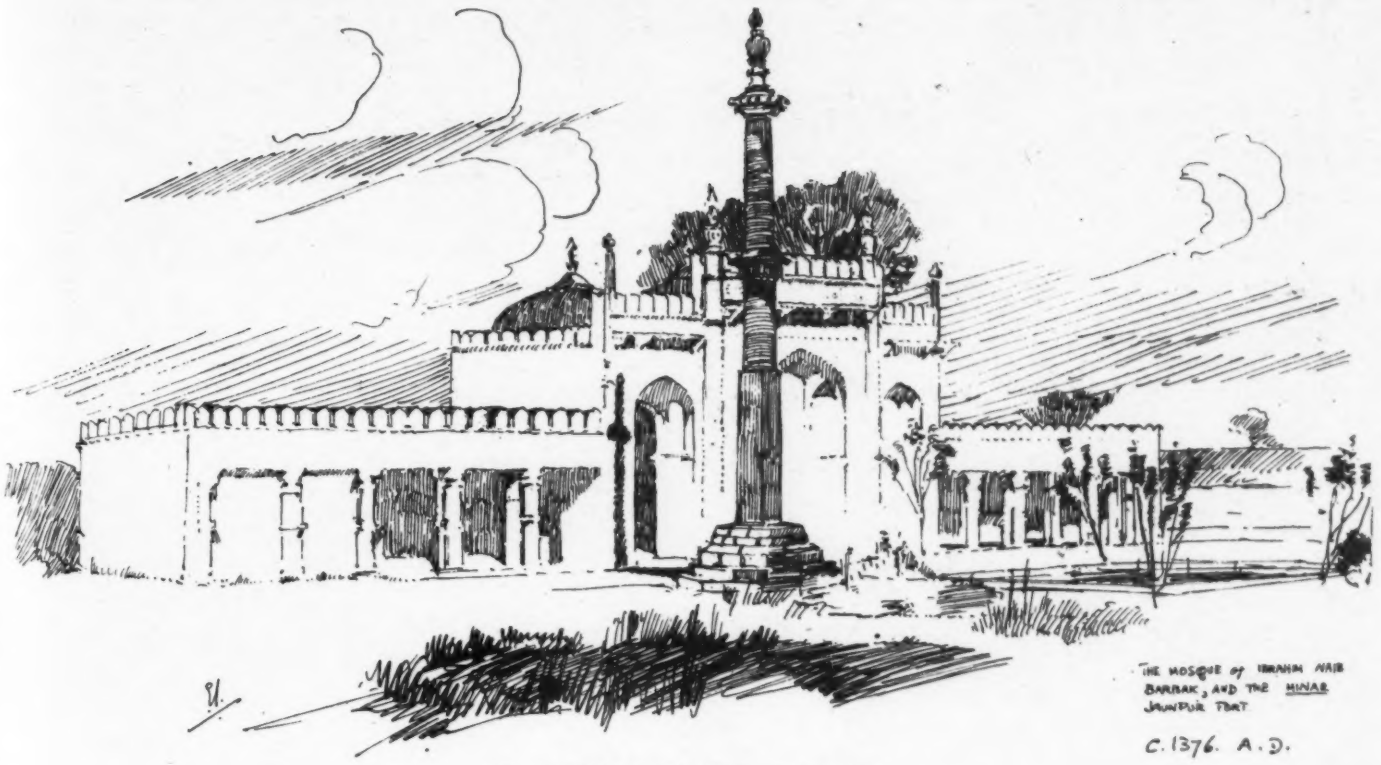
THE announcement of telephonic conversations between San Francisco and the principal cities of the eastern coast of the American continent, during which the human voice is said to have been heard for a distance of 5,000 miles, calls attention to the advance that is being made in the practical application of an invention whose possible influence on the placing and the arrangement of buildings, and on the whole question of the development and general lay-out of urban areas, does not appear to be generally recognised. It is probable, however, that this influence will be very considerable where convenience of arrangement and intercommunication are concerned. Yet, so far as we are aware, neither our architects nor our town planners have made any serious study of the subject. The "Influence of the Telephone on the Planning of Large Buildings" would make a good title for a paper at an ordinary meeting of the R.I.B.A., or for an essay or a thesis in connection with the examinations. But possibly the telephone will ultimately exercise its greatest influence over the lay-out of cities and of manufacturing or of residential areas—a matter in which the Town Planning Institute is, perhaps, more immediately concerned.

The Development of Chelsea.

THE death of Earl Cadogan seems to bring to a close a definite chapter in the history of the old riverside village of Chelsea. As ground landlord of much of the property lying between Hyde Park and the river, Earl Cadogan was directly responsible for its recent development from an old-fashioned district of narrow streets and small houses into a high-class residential neighbourhood. Most of the buildings erected were well built, and many of them were designed by skilful and well-known architects. Nevertheless, it is to be regretted that most of them were designed in a style that has already become old-fashioned. Still more is it to be regretted that so large a scheme of improvement was conceived and put into execution before the era of town planning.

A Notable Picture Exhibition.

AT the French Gallery in Pall Mall there is a rather remarkable exhibition of pictures, the property of one private owner, lent for exhibition on behalf of the Queen's "Work for Women" Fund. It is not often that one sees collected in one room so many good pictures of various schools and dates. It includes important works by Velazquez, Vandyck, Rembrandt, Reynolds, and Gainsborough among the ancients; and Watts, Rossetti, Alfred Stevens, Whistler, and Mr. Orpen among the moderns. One or two of the Whistlers are interesting because they represent the artist before he took to some of the eccentricities in painting which have become especially associated with his name; "Old Battersea Bridge," for instance, though called by the fantastic sub-title "Brown and Silver," is an admirable, unpretentious landscape suggesting no special tendencies in painting. It is interesting to see several examples of Alfred Stevens together, and note his brilliant talent and its limitations. It is all admirable workmanship, but it suggests nothing beyond workmanship. Compare these pictures with Mr. Orpen's "Solitude"; it is by no means equal to Stevens in executive accomplishment, but it has feeling and pathos, qualities which are beyond the scope of the brilliant Belgian artist. There are several remarkable small marble groups by M. Rodin, but his life-size bronze "Eve" is disfigured by the practice he has taken to of leaving his large bronze figures all rough on the surface, as if they were suffering from a cutaneous disease. But the collection as a whole is well worth a visit.

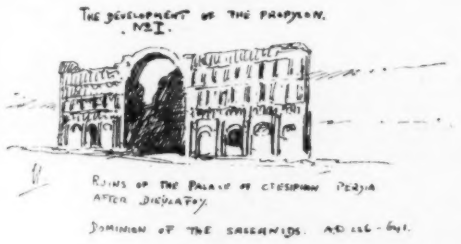


From a sketch by Mr. Gordon Sanderson.

PROVINCIAL STYLES OF INDIAN ARCHITECTURE:

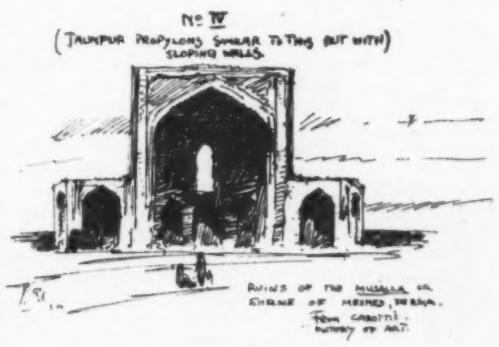
JAUNPUR.

IN 1398 the admirably-regulated horse and foot post that Mohammed Tughlak had given to India brought news to the capital that a huge host of Tartars and Moguls had crossed the Indus and were advancing with Delhi as their goal, sweeping all before them Led by the great Timur, the "Scourge of God," they found India an easy prey, and Delhi was sacked, remaining for two months a city of the dead. Loss of control at the hub of the

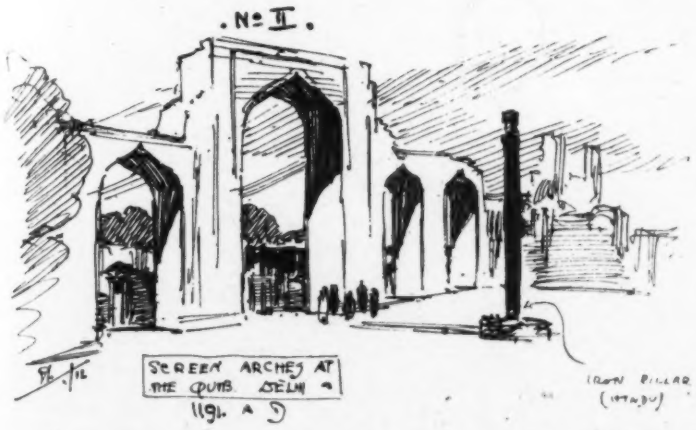

THE DEVELOPMENT OF THE PROPYLON.
No I.
RUINS OF THE PALACE OF CTESIPHON PERSIA
AFTER DIEULAFOY
DOMINION OF THE SASSANIDS. A.D. 226 - 641.

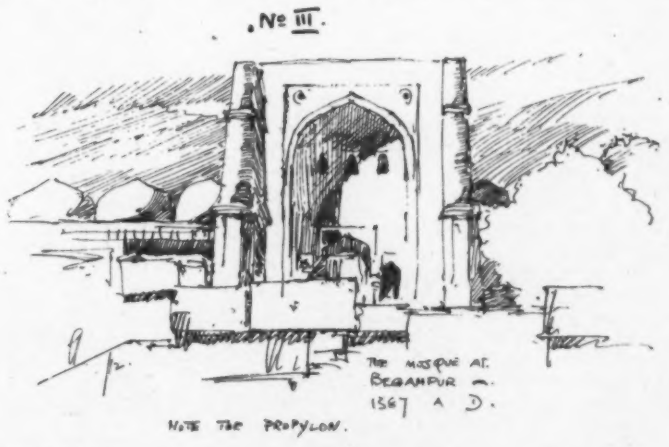
wheel led to the splitting up of the whole of the Indo-Mohammedan empire; provincial governors asserted themselves and a series of petty kingdoms sprung up, all warring against each other and owning no obedience to the sovereign power at Delhi. Each kingdom had its own style of architecture, based on the earlier Mohammedan work at Delhi and largely influenced by the character of the indigenous Hindu work of that particular locality; and each style was marked by the most pronounced individuality of its own. Perhaps the most remarkable of these provincial styles was that adopted by the Sharqi sovereigns of Jaunpur, who remained in power from 1394 to 1479, and during that time erected buildings in their capital which Fergusson considers are as remarkable specimens of their class as any to be found in India. Modelled on the structures erected in previous years at Delhi, the principal parts of these Jaunpur buildings were kept strictly Mohammedan and arcuate in style, while the subsidiary colonnades and less important detail were treated in the local Hindu style. In explanation of this curious blending of types the theory has been put forward that the craftsmen employed were largely Hindus, converted to Islam, but who clung tenaciously to their native forms; and it would seem that in the corners of the buildings where they were at work, and not so directly under the eye of the Mohammedan architect, they used their own forms of construction, which they could not employ in the more prominent portions of the structure where they were under more constant supervision. The most striking characteristic of the Jaunpur mosques is the enormous propylon, styled by Fergusson a "gate pyramid," which rises in some instances to a height of 80 ft. and screens the dome of the central compartment which rises behind it. This propylon is, it would appear, an adaptation of the series of "screen arches" first seen in India at the Qutb and Ajmer in the great mosques there, then still further developed in the Begampuri Masjid at Delhi, built some fifty years before the Jaunpur buildings were erected. The feature of the "screen arch" was, no doubt, first suggested by the enormous arches found in the Palaces of Ctesiphon, Firozabad, and Sarvistan in Persia. In that country, it may be added, these Sassanid characteristics continued to prevail, the mosques retaining the huge entrance doors framed in a lofty arch.

The faces of the Jaunpur propylons are relieved, as a rule, by a series of niche-shaped panels and horizontal bands, which serve to lighten their otherwise somewhat massive effect, the central doorway into the prayer-chamber being kept comparatively small. The Jami Masjid (*c.* A.D. 1438) is perhaps the most striking of these Jaunpur buildings, and serves as a typical example of the style. Standing on a platform some 18 ft. to 20 ft. in height above ground level, its inner court, flanked originally by double-storied colon-

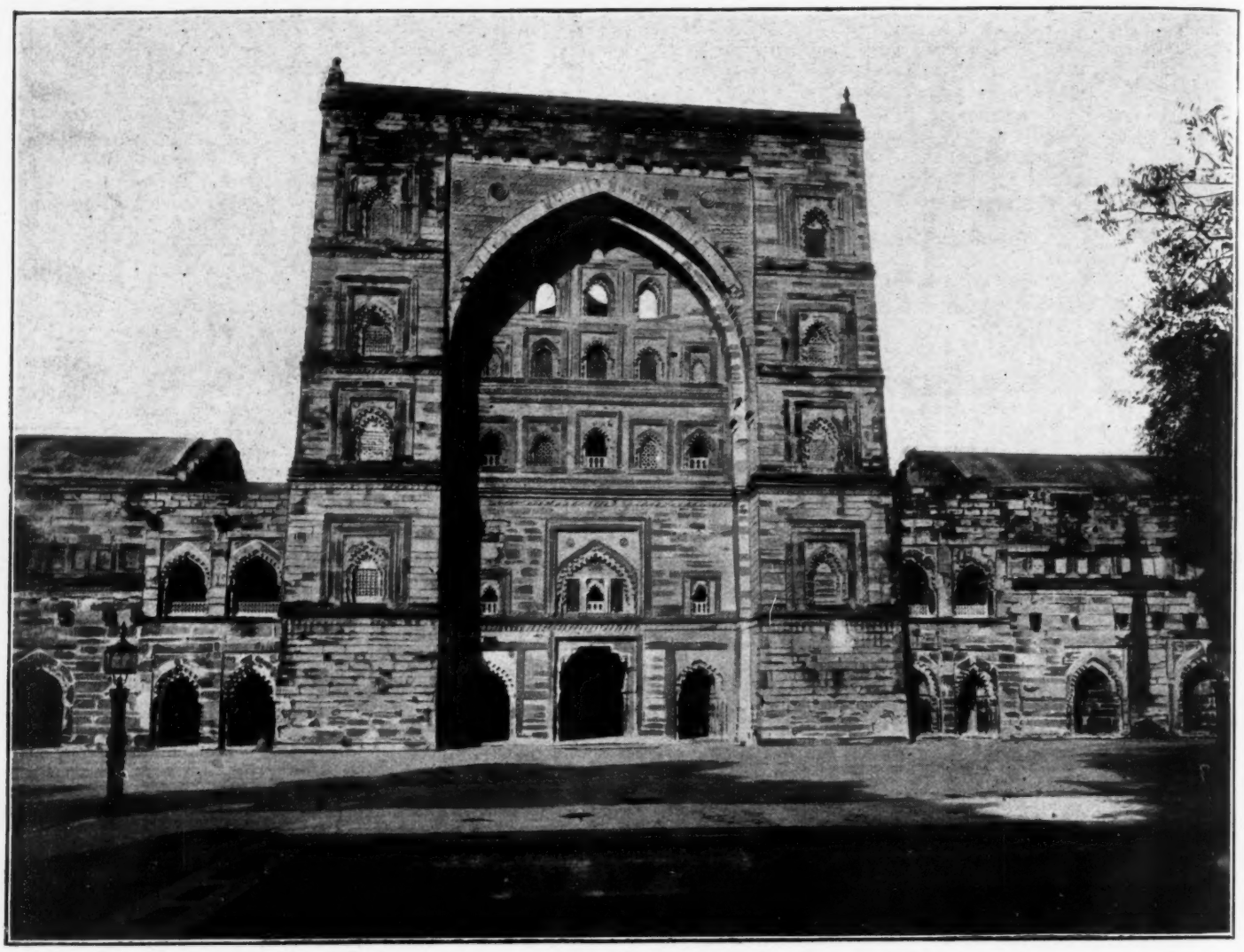

No IV
(JAUNPUR PROPYLONS SIMILAR TO THIS BUT WITH SLOPING WALLS.
RUINS OF THE MUSALLA OR SHRINE OF MESHED, PERSIA.
FROM CROSTINI HISTORY OF ART.

nades, measures some 220 ft. square, and is entered by imposing gateways on the north, south, and east. (It should be added that the east gateway was, shortly after its erection, demolished by Sikandar Lodi.) The central compartment, containing the *mihrab*, or prayer-niche, is roofed by a dome measuring some 39 ft. in diameter, the side compartments being roofed by enormous vaults. The gateways of these mosques are often found treated as miniature





From sketches by Mr. Gordon Sanderson.



The Propylon of the Jami Masjid, Jaunpur. (*See page* 241.)

propylons, while the walls generally have the same slight slope seen on buildings erected during the same period at the capital. In their propylons the Mohammedan architects at Jaunpur conceived an admirable solution of the idea of the monumental gateway. Like the great *minar* erected at the Qutb, Delhi, intended by its builder to be recognised as an emblem of conquest, a tower of victory which would be seen and understood from afar by his newly-conquered Hindu subjects, there could be no mistaking that the lofty gate-pyramid was the entrance to the house of prayer, and could be recognised as such, dominating the district in which it was placed.

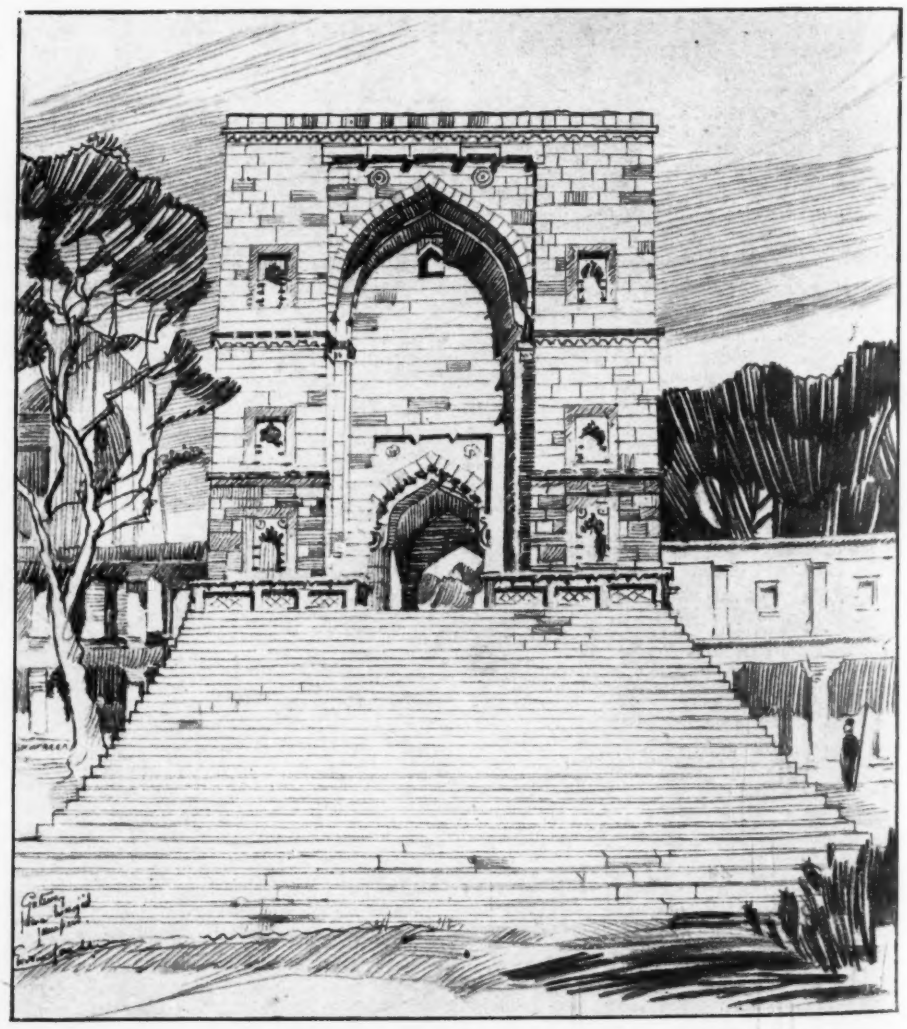
HORIZONTAL THRUST OF CHURCH BELLS DURING RINGING.

CONSIDERABLE interest has recently been aroused in regard to this question, and also as to the alleged weakness of some bell towers. The thrusts produced by a bell in ringing are therefore of renewed interest.

The photograph on page 243 was taken recently at Messrs. Mears & Stainbank's Bell Foundry, Whitechapel. It illustrates a test taken at the writer's request to demonstrate, by the lifting of actual dead weight, the approximate horizontal thrust produced by the revolution of the 280 lb. bell upon which the experiment was made.

The bell (without clapper) was hung in a 6 in. by 2 in. frame, the posts being secured at their bearing on the sill with stub tenons having splayed shoulders. This bearing point was sufficiently loose to allow the frame to move freely within the notches cut for it in the two tie rails, such movement, however, being restricted to a play of $\frac{3}{8}$ in. The rails were secured to two heavy hardwood blocks, 4 ft. 6 in. by 8 in., on sleepers which, with the sill of the frame, were sunk in the foundry floor.

The frame and bell being brought home on the inner shoulders of the notches by means of chains, pulleys, cross bar, and about 650 lb. of iron weights. The horizontal effort of the bell was obtained by swinging it up to the



Gateway: Jami Masjid, Jaunpur.
From a drawing by Mr. Gordon Sanderson. (*See page* 241.)

vertical position as is done in ordinary ringing. It was then allowed to revolve freely from the balance or rest point, when it was found that the rail shoulders began to lose bearing upon the weight being reduced below 625 lb., or nearly two and a quarter times the weight of the bell itself. The chains were attached a little above the centre of swinging, to compensate for the slight loss due to want of centre bearing at base.

The bell is the lightest or treble of a "ring" of eight bells and is 22 in. in diameter at the lip, which was 19⅜ in. from the centre of swing, the bell being hung tight up to gudgeon bar. The centre of gravity was found by experiment to be about 6⅜ in. above the lip, and thus about 13 in. from the centre of swing.

The importance of lifting the centre of gravity, as is customary with all larger bells, by their being "tucked up" into a curved headstock, can be readily appreciated. In the case in point, when the bell was set out 3 in. further by a wood packing piece, the horizontal pull was increased by over 80 lb.

In Sir Arthur Heywood's recent work, "Bell Towers and Bell Hanging," Mr. H. E. Lewis gives a most valuable chapter dealing with the theory underlying bell thrusts. The horizontal value of these is there taken, for a 1,378 lb. (net) bell, at 2·09 times the weight of the bell. This, as is pointed out by Mr. Lewis, is a moderate statement when applied to a number of bells variously "tucked up." The same applies to the vertical load which is increased by a factor of 3·94.

A confirmation of the above appears in a paper read at the Royal Institute of British Architects by Mr. R. C. Nichols so long ago as 1856. Various formulæ were given and the statement made that "The amount and direction of the horizontal strain undergo remarkable fluctuations during the motion of the bell. It is at first a thrust which becomes a maximum at an angle with the vertical of 26° 44′, diminishes to nothing at 48° 11′, increases again to its greatest value at 124° 3′, and again becomes nothing at the lowest position, passing through a series of values equal and opposite to these as the bell ascends on the opposite side. The equation for the horizontal strain indicates one advantage obtained by letting the bell into the stock, namely, the diminishing of the horizontal strain, the importance of which fact will be appreciated by architects."

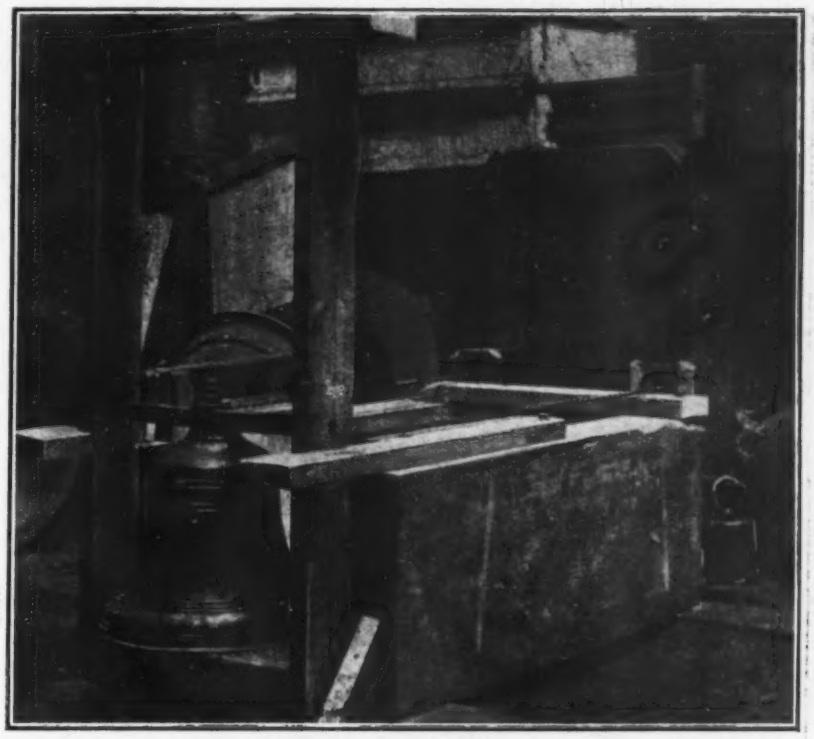


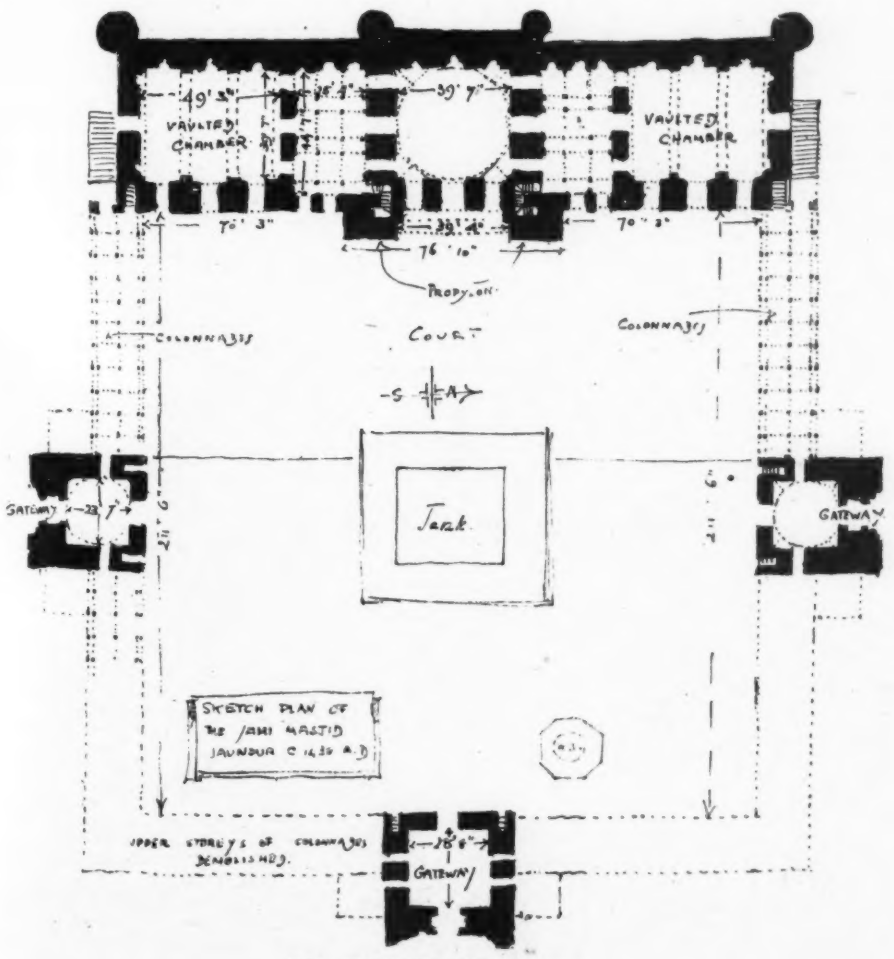
Illustration of Bell Test.

Mr. Nichols, whose remarks perhaps have reached too limited an audience, also instanced a 5 cwt. bell, giving the greatest direct strain on the crown bolt as 3¾ times, and the maximum horizontal strain on the gudgeons as 2·05 times the weight of the bell.

In all cases the above are moving or live loads and thrusts, and as such are well worthy the close attention of the architect who may be designing the tower to contain the bells. It would appear desirable, should there be delay in providing the latter, that a tablet, specifying their limiting weight and position, should be inserted in the wall, as a precautionary measure and for future reference.

Architects designing towers to carry bells will find the above data a useful check and guide.

E. ALEX. YOUNG.



The Jami Masjid, Jaunpur.

From a drawing by Mr. Gordon Sanderson. (*See page* 241.)

THE NEW HOUSE OF PARLIAMENT IN ROME.

WHEN the Italians arrived in Rome in the Christmas of 1870 the question of a suitable abode for the Senate and the Chamber of Deputies became at once a pressing one. To the respective heads of the Upper and Lower Chambers—Marchese di Torrearsa and Sig. Giuseppe Biancheri—was entrusted this difficult task; and before long the Palazzo Madama was handed over to the Senate and that of Montecitorio became the home of the Chamber of Deputies.

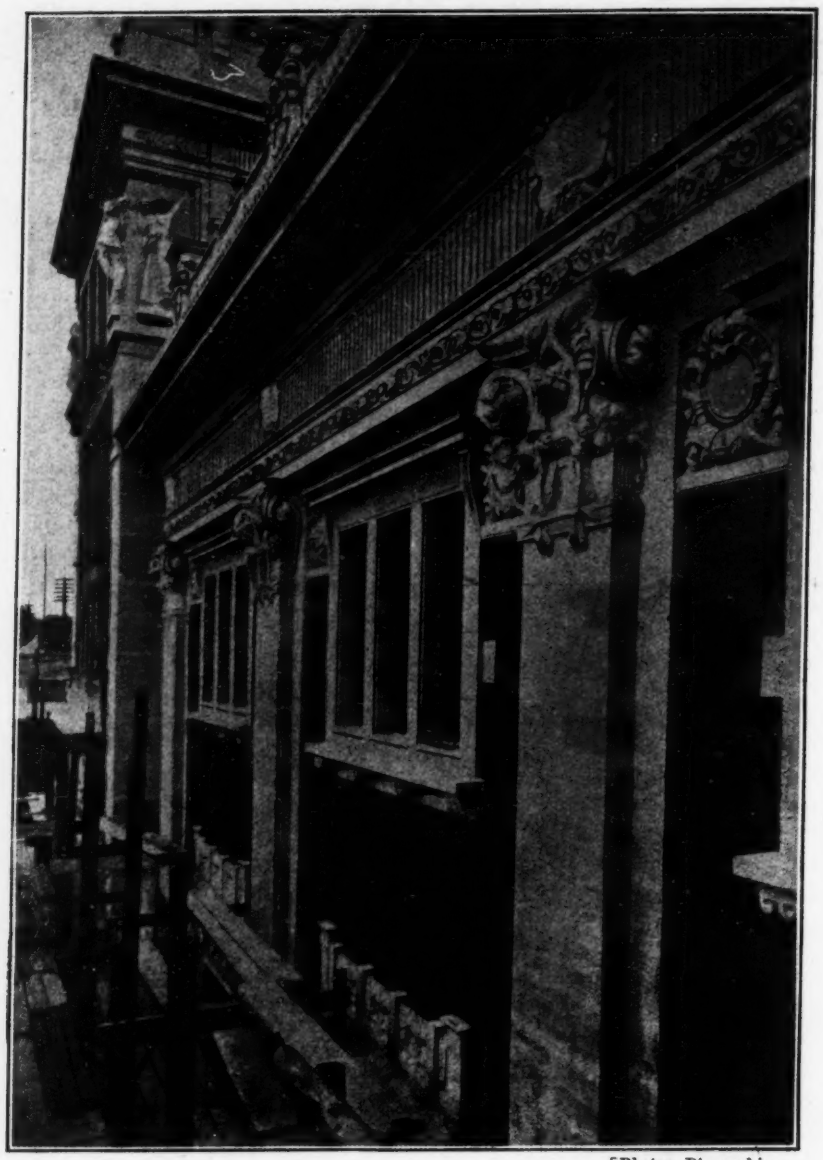
This fine palace had been commenced by the great sculptor and architect Gian Lorenzo Bernini, had been left incomplete, reconstructed on a yet vaster scale by the famous Barocco architect Carlo Fontana, but again reduced in scale owing to the enormous expense needed for Fontana's design; and on this smaller scale finally entrusted to the charge of Matteo de Rossi, one of Bernini's own pupils.

It is this palace which was thus utilised for the Chamber of Deputies of the new nation of Italy, sitting for the first time then in Rome, and has been so used ever since: but from the first the building was found to be unsuited in many ways for the Parliament of a great modern nation, and after much discussion and delay it was handed over to the Sicilian architect Ernesto Basile, whose design was finally accepted by the Chamber in their sitting of February 27, 1904.

It is my proposal to reserve a full description of the work accomplished in these twenty years for a later number of the *Builder*, when this new Italian House of Parliament has been formally opened; and this event cannot now be very long delayed, for the architect, Cavaliere Basile, writing to me only last week, said:—"As regards the Palace of Montecitorio the work is now far advanced and the *aula*" (that is the hall of Parliament where the deputies actually sit) "almost completed."

The task of the architect has been far from an easy one, for he had before him in his design to preserve the fine front designed by the great Bernini himself, which looks over the Piazza of Montecitorio, as well as the two great staircases which belonged also to Bernini's design; and at the same time to amplify the whole building behind this front and to find space for the vast *aula*, keeping the level of this portion the same as that of the ground floor; and, further, to create the new approaches to this enlarged palace by means of two side streets and a square or piazza behind, all of these being accessible from the Corso Umberto I., which runs from the Piazza del Popolo to the Piazza Venezia. Lastly, he had to do all this while the actual building was in constant requirement for public services.

It is this vast work which is now almost completed, and, having been on two separate occasions at Rome over the whole building



[*Photo: Pignocchi.*

Part of the Façade of the Palace of Montecitorio.

Designed by Cavaliere Ernesto Basile. (*See page* 243.)

with the architect himself, I can appreciate both the work required and the really fine result achieved.

Reserving a more detailed study of the plans for my future notice, I will now refer only to the hall itself, which is, after all, the central and most important functional part of the whole building.

The *Aula del Parlamento* is semicircular, with a rectangular prolongation; in the curved part are the seats, banked one above the other, of the deputies, and in the rectangular portion, facing these last, are the raised seats of the President and the representatives of the Government.

Above these seats rises the fine relief in bronze by David Calandra, which glorifies, in plastic form, the *Risorgimento*—the Rebirth of the Italian Nation, and all around the *aula* runs the magnificent allegorical frieze by Aristide Sartorio, to which a special illustrated notice has already been given in the pages of the *Builder*. Beneath this frieze a fine cornice is supported by lofty columns of the Ionic order, which enclose the arcade containing the tribunes.

The lighting is from above, from a lantern very beautifully designed by Giovanni Beltrami, though there are other windows beneath this; and the material used for all the seats and much of the architectural design is oak from the Sclavonian forests.

The Hall is of noble dimensions, comparing very favourably with the Parliament Houses of Berlin, Vienna, Paris, and even the splendid House of Parliament of Budapest; and the waiting and reception rooms without, including the noble corridor called the *Salone dei Passi Perduti*, are conceived in the same spirit of a noble and spacious design. Modern Italian art often fails, for while fine in conception it loses as compared with corresponding French art in which the line of traditional development with its refining tendency was never interrupted or broken. S. B.

BANK OF AUSTRALASIA, THREADNEEDLE-STREET, E.C.

GRADUALLY the wealth of work designed by the Hardwicks is being revealed, for members of this talented family worked in two centuries. Thomas Hardwick was a pupil of Sir William Chambers and a contemporary of Yenn's; his son, Philip Hardwick, was one of the most active of the leaders of taste during the first half of the last century, as his works with Rennie at the docks and the railway station for the London and Birmingham Railway show. During his father's advanced years P. C. Hardwick, the grandson, was responsible for the continuance of the firm's traditions, and it is not generally known that the Great Western Hotel at Paddington, with its magnificent caryatidal feature, is his work. We show on page 245 a characteristic stone entrance in the Italian mode by P. C. Hardwick, closely following the doctrines of Peruzzi. This treatment is quiet and retiring, the proportion of the parts is excellent, and the attachment of the architrave to the alternated bands of rustication is honestly and rightly adjusted. We have kept our eyes open to some of the more recent City doorways, and although their pretentious claims are more assertive their pedigree is a thing of recent creation.

ARCHITECTURAL SOCIETIES.

Birmingham Architectural Association: Decoration of Buildings in Colour.

The ninth general meeting of the session was held on the 5th inst. at the Association's Rooms in the Royal Birmingham Society of Artists' Buildings, when Mr. Halsey Ricardo, F.R.I.B.A., read a paper on the subject of "The Decoration of Buildings in Colour." The President, Mr. G. Salway Nicol, occupied the chair.

Numerous lantern slides were shown to illustrate the lecturer's remarks, but the fact that these were all in monochrome made it difficult to fully appreciate the true value of the various schemes of colour. Mr. Ricardo prefaced his paper by saying that he intended to confine his remarks almost exclusively to the interior decoration of buildings. It was pointed out how that throughout the ages, from the days of the Egyptians to the end of mediæval times, the architecture of the various periods was profusely decorated, either by applied colour or by the use of marbles and tesseræ, and in a large measure relied upon this dressing up of both interior and exterior for the effects intended to be produced, whereas in more modern times architectural effect has trusted almost entirely to form for its beauty. What a shock it would be to modern artistic ideas and ideals if in the night a body of painters could set to work in Trafalgar-square, gild the lions, paint Nelson's Column bright blue, and decorate the figure on the summit in its proper colours! And yet that was probably what would have been done by the Egyptians, the Greeks, or the Romans; at least there was nothing in their ideas of art which would have seen any inconsistency in such a proceeding. There was something in the nature of a slipping back towards barbarism in attempting to give expression to buildings by pure form alone.

The lecturer suggested that the time was now ripe for an endeavour to be made to produce a modern school or body of mural painters; in fact, numbers of men and women suitable to set out on such work were ready to hand if a demand could only be created. In such an effort it would be worse than useless to attempt to revive the ancient art in its ancient manner. The subject should be approached with an open mind unsullied and unclogged by ancient traditions and examples. There must be no striving after extravagant masterpieces in the beginning, but a content to progress little by little along a simple path which would naturally evolve from the fresh thoughts and efforts of a body of artist decorators.

The type of decoration which the lecturer considered to be desirable was something which would be within the reach of the many and not only for the very opulent few. The human figure could probably with advantage be omitted, and the designs be made to include birds, beasts, fishes, and plant forms, both natural and conventional; also heraldry might play an important part in the compositions. That such mural painting on simple but well-considered lines could be carried out in a satisfactory manner at a small cost was proved by some illustrations which Mr. Ricardo caused to be put upon the screen, showing how a bare schoolroom had recently been so treated.

A vote of thanks was accorded to the lecturer on the motion of Mr. W. Doubleday, seconded by Mr. R. Catterson Smith (Hon. Member and headmaster of the Birmingham School of Art), and supported by Messrs. Kermeth, J. A. Swan, A. Harrison, and J. Cotton.

Glasgow Institute of Architects.

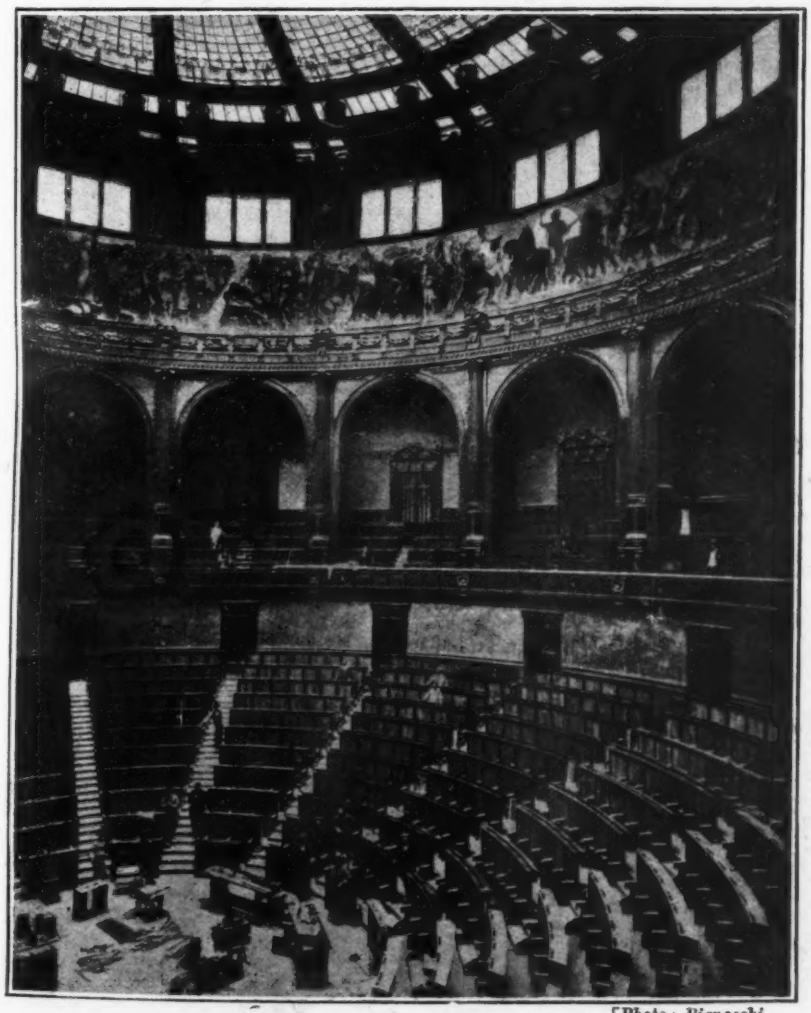
In the Report by the Council, which was adopted at the annual meeting of the Glasgow Institute of Architects, held on the 3rd inst. in the hall of the Institution of Engineers and Shipbuilders, Elmbank-crescent (Mr. John Watson, F.R.I.B.A., in the chair), it was stated that the membership stood at 111 Fellows, seventy-six Associates, forty-eight lay and student members. The increase in applications for Fellowships had not been so great as in some former years, owing probably to the heavy financial demands caused by the war. The Council desired to place on record its appreciation of the hearty response made by members of the Institute to the nation's call for military and naval service. Two Fellows, five Associate members, and seven student members were now serving with the Navy or the Regular and Territorial Forces of the country at sea, at home, in Belgium, or in France. In view of the number of students who had gone on military duty it was agreed to postpone for a year the competition for the Alexander Thomson Memorial Studentship, which was due to be held this year, and to allow those eligible now, but unable to compete, to do so next year. In connection with the Architects' Special War Relief Fund promoted by the Royal Institute the Council gave a donation of £50 from the Institute's funds, and this, together with subscriptions from individual members of the Institute amounting in all to £92 6s. 3d., was forwarded to the R.I.B.A. Intimation was received that a sum of £700 had been collected by the R.I.B.A. for the fund,

the allocation of which was in the hands of the Architects' Benevolent Society, and it was agreed that the Society should be allowed to deal with the contribution from this Institute. A local Committee had, at the request of the R.I.B.A., now been formed to deal with necessitous cases in the profession.

The President, in moving the adoption of the Report, reviewed the operations of the past year. He said that notwithstanding the war, which had severely crippled the private practices of individual members, the work of the Institute had been actively carried on and its aims and objects steadily maintained. The various Committees had been kept busy, especially the Practice Committee, which had been called upon to co-operate with the various architectural societies in Scotland, the Faculty of Surveyors of Scotland and the various trade societies concerned in the preparation of national modes of measurement and conditions of contract for building work in Scotland. The mode of measurement for wright-work, which had just been issued, was the first-fruits of their joint labours. The meetings had latterly been held under the chairmanship of Sir George R. Askwith, K.C. At the first glance they might not quite like the new rules, seeking as they did to eliminate "after measurement" as far as possible. They had been long accustomed to this procedure, and considered it the best in the majority of cases. On the other hand it was undoubtedly desirable that they should have uniformity of mode throughout Scotland. Their right to demand "after measurement" where advisable would again have to be taken up in discussing conditions of contract. In future, contracts entered into with the intention of having no after measurement would of necessity require to be more matured before being proceeded with. On all the other points under discussion the architects had much to congratulate themselves upon, the principles upon which they laid stress having been accepted. There had been fewer competitions during the past year than formerly. It was pleasing to note that the advice of members in regard to conditions had usually been accepted, with a result which had proved satisfactory alike to promoters and competitors. In some cases the necessity of framing proper conditions of competition had induced promoters of small building schemes to place their work by direct commission and thus avoid competition—a procedure which had much to commend it. It was hoped that members would loyally support the Council in their efforts in this direction. A Committee had been formed to act in conjunction with the Architects' War Committee of the R.I.B.A., having as its object the providing of work for architects in necessitous circumstances.

The Report was adopted, and office-bearers were afterwards elected.

Bank of Australasia, Threadneedle-Street, E.C
P. C. Hardwick, Architect. (*See page 244.*)



[*Photo: Pignocchi.*

The New Hall of the Italian Parliament.
Designed by Cavaliere Ernesto Basile. (*See page 243.*)

THE SURVEYORS' INSTITUTION.

AN ordinary general meeting of the Surveyors' Institution was held on the 8th inst. at No. 12, Great George-street, Westminster, S.W., Mr. Howard Chatfeild Clarke, President, in the chair. The minutes of the previous meeting were read and confirmed.

It was announced that eleven publications had been received for the library, in addition to two donations of money, and it was agreed that the thanks of the Institute should be conveyed to the donors.

Mr. W. P. Ryan (Fellow) opened the adjourned discussion on the papers delivered by Mr. Isaac Dixon (Fellow) and Mr. E. H. N. Ryde (Professional Associate), on "The Report of the Land Inquiry Committee on Rating," and devoted his remarks entirely to the subject of rating of site values.

Mr. Ryan said the Land Inquiry Committee's proposal to levy a rate of 1s. 8d. in the £ on annual site value would in example (quoted in Mr. Dixon's paper) have the effect of increasing the rate in the £ on the rateable value from 6s. 8d. to 11s. 8d., relieving the occupier of all rates, and giving 5s. more in the £ to the rating authority, and would reduce the capital value by £3,500. Mr. Dixon's proposal of 10d. in the £ would reduce the capital value by £1,750. Mr. Ryan then quoted examples showing the unequal effects of the proposed levy, based on actual facts within his own knowledge. He pointed out that if the occupier of a football

club was distinct from the landowner, he would get the greater benefit, though his expenditure would be comparatively little. The cinema theatre, he said, would come next, followed closely by the shops and bank; the lessee of land, upon which he erects works employing several hundred workmen, only gets a trifle, but the poor working man, if he is not the freeholder, gets less still. Mr. Ryan said, "It is prophesied that if site values are taxed, this question of working class houses will be automatically settled and factories will spring up by magic; the facts set forth above rather falsify the prophets."

The following gentlemen also took part in the discussion:—Mr. Walter Ryde, K.C., Mr. Walker (of Glasgow), Mr. W. G. Cook, Mr. Arthur Hunnings, and Mr. C. H. Dinwiddy.

Mr. E. H. N. Ryde briefly replied, and thanked the members for the interest taken in his paper. Mr. Dixon was unfortunately prevented from being present.

The Secretary announced that the next ordinary general meeting will take place on Monday, April 12, when papers will be read by Mr. C. S. Joseph and Mr. R. Strachan Gardiner on the "Report of the Land Inquiry Committee on Housing."

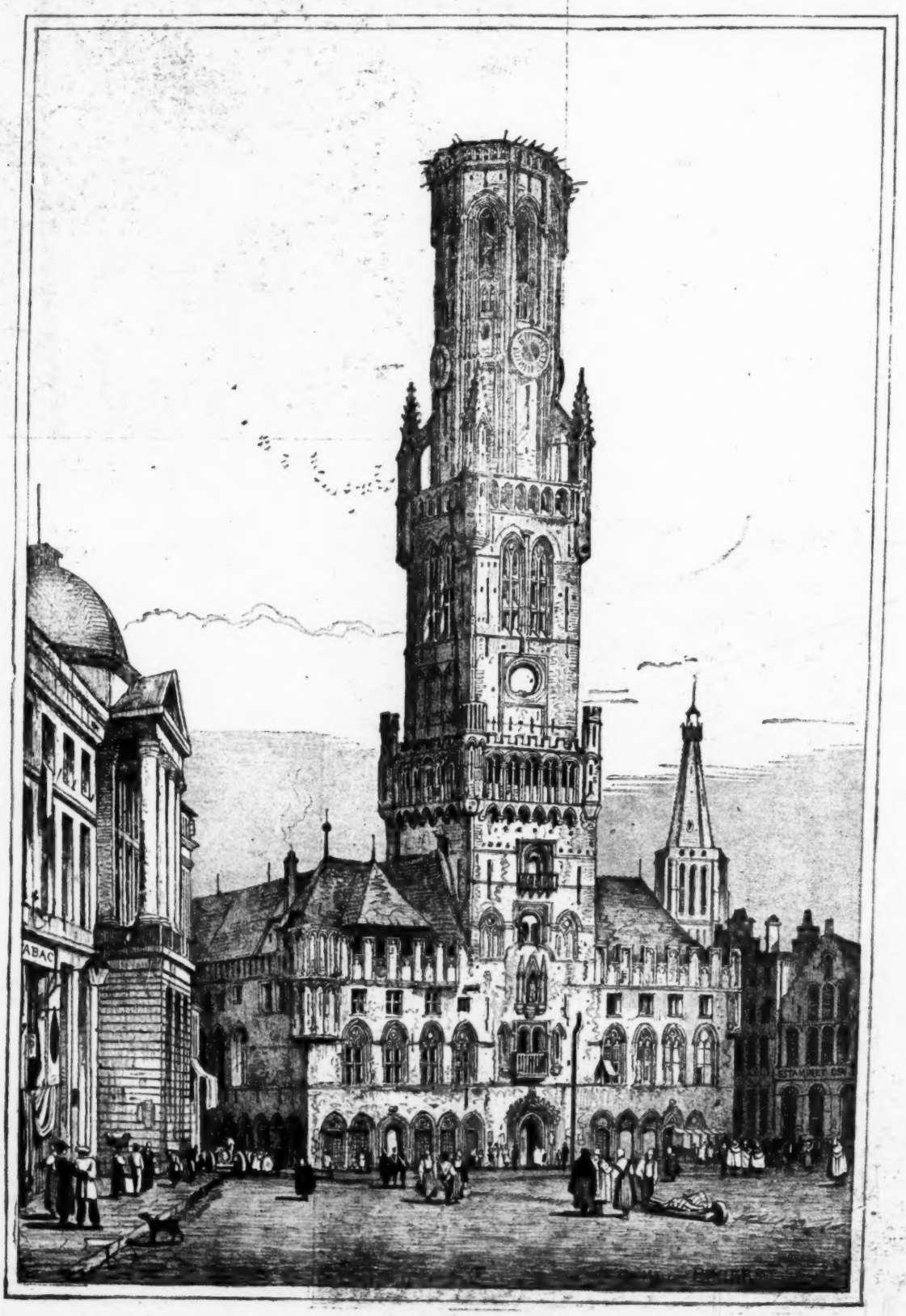
BOOKS.

Sketches by Samuel Prout: Special Winter Number of the "Studio." Edited by CHARLES HOLME. Text by E. G. HALTON. (The Studio, Ltd., Leicester-square, London. 5s.)

IN the *Builder* of 1852 there appeared an "appreciation" from the pen of John Britton of Samuel Prout, one of the artists who had been associated with him in the production of the "Beauties of England and Wales." Prout had endeared himself to the architects of that generation, and there is no doubt that his work still appeals strongly to those who are concerned with the art of building. The special number of the *Studio*, therefore, will be welcomed, with its admirable illustrations and well-marshalled facts concerning the artist.

Prout was not immediately successful with the architectural drawings which he executed afterwards with such unapproachable skill. He was a youth of about eighteen years when John Britton discovered him in Plymouth and offered to take him on his tour in Cornwall. The result of this proposition was that Prout set out with the worthy antiquary to walk from Plymouth to St. Germains, where the boy was set the task of making a drawing of the Norman parish church. He failed in his perspective and composition, and he was only a little more successful in his attempts to represent other buildings in Cornwall. So, after making a trial sketch of Truro Church, Prout returned to Plymouth, and Britton went on alone to Land's End.

This discouraging experience of the realities of artistic work was not unfruitful, of course, and Prout studied hard to correct his faults.



La Halle, Bruges.

From "Sketches by Samuel Prout." (Winter Number of the *Studio*.)

Later on he came to London, lived with Britton in Clerkenwell, and derived benefit from seeing drawings by Turner, Girtin, Cotman, and others. From 1803 he exhibited at the Royal Academy, and he began to find employment in connection with the "Beauties of England," "Architectural Antiquities" and other publications. Britton now found Prout to be a capable collaborator. The artist found his drawings saleable, and his services as a teacher were in demand.

It was about 1819 that Prout paid his first visit to the Continent, then recovering from the Napoleonic wars, and the effect on his work was undeniable. He developed facility with the lead pencil and improved his technique in water colours. The mediæval towns had a great fascination for him and he employed his talents with prodigality. He produced a mass of work, including drawings direct on the stone; and from two volumes of these lithographs, namely, "Sketches in Flanders and Germany" and "Sketches in France, Switzerland, and Italy," the selection of illustrations for the *Studio* monograph has been made.

Everyone will have favourites among these examples of Prout's drawings in Antwerp, Brussels, Bruges, Ghent, l. uvain, Malines, Chartres, Tours, Strasb urg, Frankfurt, Nuremberg, Munich, Prague, and other places. Many of the drawings were so highly praised by Ruskin that nothing more can be said of them. They are views by a sympathetic draughtsman of buildings and streets which are familiar to most students and whose charms are unending. Though Ruskin thought Prout had added an extra storey to a building in Nuremberg the artist was faithful enough generally in his transcripts. The great thing is that Prout gave us picturesque and reasonably architectural drawings without labouring the construction, and he pleases not only the professional but the amateur traveller. Many of the places illustrated in this Prout memorial are in the danger zone at the present time, and the reproductions of the drawings have an additional interest. As Mr. Halton says truly, "His wonderful series of Continental drawings is a precious heritage, the significance of which was never more apparent than it is to-day."

The London Topographical Record. Illustrated. (Printed at the Chiswick Press, and issued from the Office of the London Topographical Society, 7, Baker-street, W.)

THIS admirably produced and interesting volume, the ninth of its series, contains the fourteenth annual Report of the London Topographical Society, and much else besides. Dr. Norman's delightful paper on the facsimiles of the drawings of Old and New London Bridge and of Southwark Bridge, by E. W. Cooke, R.A., dated between 1829 and 1832, in the Guildhall, issued to subscribers in 1913, gives a most interesting account of the famous bridge, which in its earliest form as a stone bridge replaced the wooden bridge swept away in a storm in 1091. This original stone bridge, 926 ft. long and 40 ft. wide, was fitted with a drawbridge, which only disappeared in the eighteenth century. Its central pier was surmounted by a chapel dedicated to St. Thomas à Becket, and it was protected by two fortifi d gates; the southern one, after many vicissitudes, was rebuilt in 1728 and removed in 1760. It is not a little interesting to read that the Royal Arms, which then stood over this gateway, are still in excellent condition on the walls of a tavern in Newcomen-street, Borough, which stands on the site of Axe and Bottle-yard. It was the northern gate on which the heads of traitors were originally impaled; when this was taken down in 1577 they were transferred to the southern gate. Why Temple Bar should afterwards have been chosen for the same gruesome purpose is unknown to the present writer. The splendours of Nonesuch House, the signs of the booksellers whose shops were on London Bridge, the fame of the fishery below it, the alterations by Dance, and the removal of the shops—all these did not suffice to save the bridge from being sacrificed to modern requirements, and the new bridge was opened in state by William IV. and his queen in 1831. The history of Southwark Bridge is less romantic; it was built as a speculation by a private company in 1819, but did not prove a financial success; the dividends were derived from the tolls, and the toll houses were only removed in 1868, when the Corporation took over the bridge.

The second article on Roque's Plan of London concludes with a plea from its learned author, Dr. Wheatley, for "a complete list of Roque's many Maps and Plans," for the compiling of which no one is better fitted; as to the question on p. 17, it should not be hard to discover whether or not a Mr. Man was Town Clerk in 1739.

Mr. Spiers's articles on Disappearing London are always delightful, and the three photographs of New Inn, taken in 1889, and the houses on the north side of Nevill's-court, Fetter-lane, taken in 1910, are among his best. The view of the backs of the houses in Gloucester-street, Queen's-square, laid bare for a brief time in 1910 by the building of the Bonnington Hotel, should make all Londoners desire to occupy, or at least to visit, a back room in that hotel.

Mr. Ordish's article on "Blake and London" contains the interesting suggestion that to understand the London of Blake we must study the works of Hogarth; he does not add what the present writer believes to be the case, that nowhere in the works of Blake is to be found a single reference to that painter. Blake could lament the fate of Barry and Mortimer time after time; the busy, pugnacious, and perhaps rather Philistine life of Hogarth did not touch his heart. Mr. Ordish does not, however, mention one characteristic Blakeian touch of devotion to London in the scorn which that artist, who knew every inch of London and its suburbs south of the river, poured upon his rival Stothard for having in his "Canterbury Pilgrims" placed "the scene of his picture by Dulwich Hills, which was not the way to Canterbury; but perhaps the painter thought he would give them a ride roundabout, because they were a burlesque set of scarecrows, not worth any man's respect or care," whereas Blake had made the landscape in his own picture of the same subject "an eastward view of the country, from the Tabarde Inn, in Southwark, as it may be supposed to have appeared in Chaucer's time."

The volume concludes with the Report of the annual general meeting of the Society, with an abstract of Dr. Norman's admirable lecture on London City churches, the concluding passage of which, dealing with Wren's work in the City and given in Dr. Norman's own words, urges with perfect truth that the grouping of St. Paul's and the fifty parish churches built by Wren is not accidental, but that the great architect "planned his tower and spires to group together with the dome of St. Paul's, the great cathedral crowning and dominating the whole. . . . Such a triumph of effect could not have resulted from mere accident. Besides, we know that he had well thought out the subject, since he prepared an elaborate plan for the rebuilding of the whole City, with the churches more or less isolated in conspicuous positions, and a river quay from Blackfriars to the Tower." We commend this passage, and indeed the whole work of the London Topographical Society, to the notice of those in authority who lightly sacrifice such treasures as Wren's churches, whether for convenience or gain.

Furniture in England from 1660–1760. By FRANCIS LENYGON. (London: B. T. Batsford, Ltd. £2 2s.)

THE first chapters of this fine book form an interesting historical *résumé* of the subject. Previous to the Restoration the furniture in England was generally simple and of few types, and there is little that can be compared to the magnificent work of France and Italy. After the Restoration, owing to the growing wealth and greater complexity of civilisation, there was a great change, and foreign influences dictated the design and decoration, while the making of the older traditional English forms was carried on only in country districts.

The King's ministers and mistresses vied with one another in the splendour of their houses and the extravagance of their lives. The apartments of Louise de Kerouaille, afterwards Duchess of Portsmouth, are described by Evelyn "now twice or thrice pulled down and rebuilt to satisfy her prodigal and expensive pleasure, while Her Majesty's does not exceed some gentlemen's ladies in furniture and accommodation. Here I saw the new fabric of French tapestry, and for design, tenderness of work, and incomparable imitation of the best paintings beyond anything I had ever beheld. Some pieces had Versailles, St. Germain, and other palaces of the French King with hunting figures, and landscapes, exotic fowls, and all to the life rarely done. Then for Japan cabinets, screens, pendule clocks, great vases of wrought plate, tables, stands, chimney furniture, sconces, branches, braseros, etc., all of massy silver and out of number."

The King's Ministers led the way, for in those days they could without scandal accumulate an estate sufficient to support a dukedom. The wealthy merchants followed suit, and Sir Dudley North spent £4,000 on the furnishing of his rooms in Basinghall-street. Evelyn wrote:—"Locksmiths, Joyners, and Cabinet Makers and the like from very vulgar and Pitiful Artists are now come to Produce Walls as curious for the fiting & admirable in their Dexterity of Contriving as any we meet with abroad, and in particular our Smiths and Joyners they Excell all other nations whatsoever."

The early and more powerful foreign influence was Dutch, and much Dutch furniture was imported, but the likeness between English and Dutch contemporary work is so great that it is difficult to differentiate one from the other. French influence was accentuated by the Huguenot immigration which gave so great an impetus to our handicrafts. For furniture of English and Dutch origin, walnut, either solid or veneered, was usually chosen, and carving prevailed as a means of decoration, brought under Grinling Gibbons to a great pitch of perfection. Gilding was on the increase, and gilt side-tables with marble or gesso tops began, with their accompanying mirrors, to take their place in schemes of decoration. The glazed bookcase or cupboard was introduced, and the dining-table of the period was usually oval, while it became the fashion to use several small instead of one large table. Stools were still largely used, while the chairs of the late Stuart period are distinguished by the broad carved stretcher, the prominence of the double C curve, the roll over of the arms of armchairs, and the tall caned backs.

With the accession of George I. Venetian influence became paramount, though little Italian furniture was actually imported, as English execution was at its best. The new influences at work which made furniture part of the architectural scheme of decoration was apparent in the arrangement of the furniture as well as its design and decoration. Crowding was impossible, and Sir W. Chambers, speaking of Early Georgian houses, especially those designed by Kent or Lord Burlington, speaks of a hall or salon large enough to receive a company of eighty or one hundred guests, furnished with six or eight chairs and a couple of tables. Trusses decorated with the acanthus leaf and pedestals for busts and bronzes came largely into use, as well as side-tables with carved frames and marble tops, with the frequent introduction of figure sculpture. Stools instead of chairs were much used, as they presented a more dignified appearance in a State chamber, but they only formed part of the suite, armchairs, couches, and settees being their necessary complement. Another feature which distinguishes Early Georgian furniture was the use of mahogany, which became fashionable after 1720, and the demand for it increased after 1733, when the duty on its import was removed.

Towards the middle of the eighteenth century three influences dominated English furniture—the French, which was widest in its appeal to the cultured classes; the Gothic, which was the cult of a few; and the Chinese, which was restricted to "inferior" rooms. The English rococo is a vigorous version of the French *rocaille*, which does not seem to have affected England till shortly before 1740, when, according to the *London Magazine*, the "ridiculous imitation of the French appears to have become the epidemical distemper of the kingdom," and the earlier examples show little of the extravagance of the *rocaille* of Meissonier, but about 1750–1760 carvers like Chippendale and Johnson intensified the style to exhibit their skill. English furniture differed chiefly from French in the absence of ormolu mounts, and found its most appropriate expression in highly-carved objects like commodes, side-tables, mirrors, and candle stands.

The revival of Gothic was not carried out very seriously in furpiture, and, in the case of the Chinese style, ornament of a typical character was applied to furniture in much the same manner. The forms of furniture remained almost unaltered; the Chinese character was given in decoration. Chippendale described

the Chinese taste as being "the most useful of any other." He spoke of chairs after the manner as "very proper for a lady's dressing-room, especially if hung with India paper, and they will likewise suit Chinese temples." These garden structures have vanished, but a few bedrooms have survived, which are completely furnished. A reaction towards more classical models set in about 1760, when Adam set the fashion for design on severer lines. Satinwood was introduced into England in the late eighteenth century, and added a note of colour. Another colour note was the introduction of painted furniture to harmonise with his later highly decorated and painted interiors. The duration of this type was a short one, beginning from about 1770 and ending in 1785. The object of the design of the later furniture was to bring it in complete accord with the surrounding architecture. From 1775 a pronounced Louis XVII. feeling is noticeable in Adam's furniture designs.

Chairs, stools, and settees, with their upholstery, form a section of the work from which we illustrate a fine transitional example of the date of 1690—a beautiful chair with cabriole legs and a curious stool with shaped and carved legs dating from *circa* 1670—while a very fine selection of examples of settees of all kinds and day-beds are also given.

Beds, cornices, and curtains come next under review, and it may be said that their elaboration was partly due to the habit of ladies of holding receptions and of royal personages giving audiences when in bed. The bed, like the chimneypiece, has always had a high decorative value, which is shown by such examples as the State Bed formerly at Holme Lacey, and that at Ramsbury Manor. Colour plates are given of fringes and bed-hangings.

Tables are illustrated by a very fine collection of examples of all types of design, among which may be noted a very curious card-table of walnut inlaid with a key pattern in yew and laburnum.

The section on Bookcases and Cabinets will be especially useful and interesting to the architect, as it is usually here that he essays his first excursion into the field of furniture designing, while dressing-tables, commodes, and writing-tables of all kinds are fully illustrated and shown.

Pedestals, brackets, wardrobes, and mirrors are described in turn. Chapters on Lacquer-Work and Clock Cases, on Gesso and Silver and Silver-Mounted Furniture complete the work.

The 447 illustrations are exceedingly well chosen, and the book is one which should prove of great value and use to architects as well as to the art-loving public. The colour plates are very well reproduced and add interest to the book, which will prove a valuable work of reference to all who wish to study the subject.

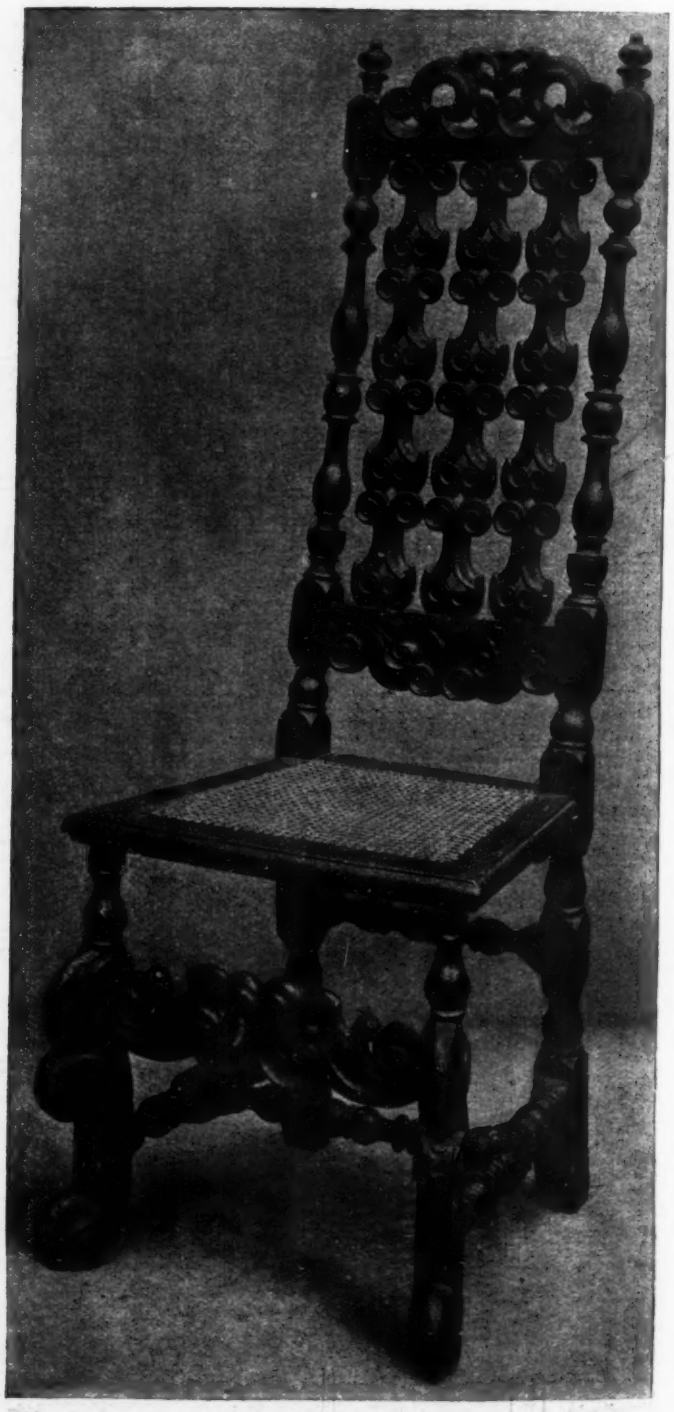
Architects have a practical reason as well as an æsthetic one for the study of furniture, as many become interested in buildings which contain furniture through an original love for furniture only, and it is well to be grounded in a subject which many an architect's clients have acquaintance with.

Then, too, it may be said that in furniture more than anything else is the skill of the worker made manifest, and the beauty of carving and elegance and suitability of form most apparently demonstrated. And in the more decorative aspects of architecture it is frequently difficult to say where architecture ends and furniture and decoration begin. All we know is that at their best they are all component parts of a great art.

ART SCHOLARSHIPS AND EXHIBITIONS.

The London County Council announce that they will be prepared to award, in 1915, sixty scholarships for full-time day instruction and a number of exhibitions for evening instruction. The Council will reserve a number of the scholarships for those engaged in artistic crafts in order that young artisans who are anxious to widen their knowledge of their craft may be given facilities for relinquishing their occupation for a year or more in order to follow a course of advanced instruction in artistic crafts. Application forms—T2/294 for the scholarships, and T2/264 for the exhibitions—may be obtained from the Education Offices.

Chair illustrating French influence in design.



Chair of the early part of the Reign of Charles II.

From "Furniture in England from 1660-1760," by Mr. Francis Lenygon.

CORRESPONDENCE.

Westminster Hall Roof.

SIR,—I notice in your last issue under this heading ("General News") Mr. Beck's estimate *re* cost of above roof—£60,015—two items, viz. :—

Steel reinforcement	£10,530
Ditto, labour	12,285
Total	£22,815

This is only experimental and not necessary, and would be a waste of money. The treatment of this fine timber roof with "Sideroleum" (the wood preservative), as I suggested in a former letter to the *Builder*, would permanently restore the roof. True restoration is replacing the parts which have perished, and not adding a heavy steel construction which does not add to the preservation of this fine old roof built in 1360. If my former suggestion were adopted the roof would be stronger than when erected nearly 600 years ago.

HENRY H. B. SANG,
Architecte-Decorateur.

GENERAL NEWS.

Prints and Drawings Department, British Museum.

Consequent upon the death of the late Mrs. C. J. Sale, of Holt, near Worcester, an important collection of water-colour drawings, by Turner, Peter de Wint, David Cox, and other painters, reverts to the National Collection of Prints and Drawings. The collection, which contains many fine examples of David Cox, consists of about 100 drawings that belonged to the Rev. C. J. Sale, Rector of Holt, who died eighteen years ago, bequeathing it to the Museum, subject to his widow's life interest therein. Sir Sidney Colvin, late Keeper of the Prints Department, is an executor of Mr. Sale's will, and made a selection for the Museum some while ago. The drawings that are now not selected for the nation will devolve upon the Corporation of Worcester. The Department has also acquired by gift of Mr. Frank Brangwyn, A.R.A., twenty-four etchings by him of the ruins in Messina after the earthquake in 1908.

State Purchase of Timber.

The Government purchases of timber were discussed at the annual meeting of the Timber Trade Federation, at the offices of the London Chamber of Commerce recently, when the following resolution, proposed by Mr. Alexander Farquharson (ex-President), and seconded by Mr. C. J. Morgan (ex-President), was unanimously carried, a copy being ordered to be sent to the Prime Minister :—"That the members of this Federation, representing all branches of the timber trade throughout the country, protest against, and strongly resent, the unfair aspersions cast upon a large section of the trade by a Minister of the Crown in the House of Commons in connection with the question of the supply of timber for Government purposes, and record their regret that, although the Director of Army Contracts stated on December 30 last 'that the principle of consulting leading representatives of the various trades on points where expert assistance is useful' had been adopted for some time by his department, it has not been applied to the case of the timber trade, through the Federation or otherwise."

Competition with Germany and Austria-Hungary.

In connection with the campaign undertaken by the Board of Trade on the advice of their Advisory Committee on Commercial Intelligence to assist British manufacturers and merchants to secure trade formerly in the hands of German or Austro-Hungarian firms, the Board continue to receive a very large number of inquiries for the names of sellers or buyers of articles of which the sources of supply or markets have been interfered with by the war. Special arrangements have been made in the Commercial Intelligence Branch of the Board of Trade for dealing with these inquiries, and List 8*b* of articles which inquirers desire to purchase is now ready and may be obtained by United Kingdom manufacturers and traders. British firms interested, as suppliers, in any of the goods mentioned should communicate with the Director of the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C.

Sources of Temporary Water Supply.

The Geological Survey and Museum have published some notes on sources of temporary water supply in the South of England and neighbouring parts of the Continent, in which are illustrated the possibilities of obtaining drinking-water at short notice by temporary works. These notes are based on personal experience of the varied sources of water existing in the South of England, and on the assumption that the conditions prevailing in the tertiary and chalk areas of the neighbouring parts of the Continent will be much the same as those in the English counties which are underlain by those formations, due regard being paid to the changes in character undergone by the strata. Copies can be obtained from the Museum, Jermyn-street, S.W., price twopence.

Liverpool Corporation Dwellings.

A report dealing with the work of the Housing Committee of the Corporation during 1914 has just been issued. In the course of the year the erection of the dwellings in the St. Anne-street area was completed, comprising thirty-six three-roomed dwellings, thirty-six two-roomed dwellings, and six three-roomed dwellings to which shops are attached. The Committee have now under their control 2,824 tenements, of which number 2,792 are used as dwellings, thirteen as lock-up shops, and nineteen as dwellings and shops.

Manchester Royal Exchange Portico.

A rather late attempt to save the portico of the Royal Exchange from destruction is to be made at a meeting of the Manchester City Council, when Alderman Abbott will move that the Improvement Committee be requested to confer with the directors of the Exchange "regarding the fine portico of the present building, with a view to the re-erection, if possible, of that distinctive architectural feature in connection with the new Exchange building."

The City of London National Guard Volunteer Corps : Engineers' Unit.

The City of London National Guard is rapidly developing under the direction of the Commandant, Colonel G. T. B. Cobbett, V.D., into a well-organised force. The National Guard consists exclusively of men over forty years of age, and includes more than 2,500 members. With the object of further increasing the scope and practical value of the Guard, it has been decided to form in connection therewith a Corps of Engineers, comprising members of all branches of the engineering profession. We understand that some of the leading engineering institutions have already expressed their readiness to co-operate in the formation of the new Corps, which will probably be divided into units, each composed of professional men specially qualified for dealing with classes of work coming under the general heads of civil, mechanical, electrical, and sanitary engineering. It is announced that the command of the Engineers' Unit will be taken by Colonel C. E. Cassal, V.D., F.I.C., F.C.S., F.R.San.I., late Commanding Officer of the London Brigade Royal Garrison Artillery Territorial Force, and late Commanding Officer of the 1st London Royal Engineers (Volunteers). Further particulars and application forms for membership may be obtained from the Adjutant, the City of London National Guard Volunteer Corps, 99, Gresham-street, E.C.

The London Society.

The annual meeting of the London Society took place on Tuesday at the Royal Society of Arts, when the President, the Earl of Plymouth, took the chair. In moving the adoption of the annual Report his Lordship said he thought the special work being undertaken brought out the usefulness of each man to the utmost, and he hoped the foundations would in this way be laid of a new London plan which should prove a source of inspiration to those who came after us.

Mr. Paul Waterhouse, in seconding, said the Society did not attempt to originate great expenditure, but merely to maintain a watchful interest in that expenditure which must necessarily from time to time be made.

Mr. F. Eiloart proposed the election of the Council for the coming year, which included the names of the old Council, and also those of Mr. R. Frank Atkinson, Mr. E. J. Brown, Mr. F. L. Dove, Mr. Henry Lovegrove, and Sir Robert Perks.

Sir Aston Webb, R.A., expressed the regret of the Council at the death of two of its most valued members, Earl Cadogan and Mr. William Willett, who had in their different ways done so much for London. He then gave a brief outline of the work now being done in connection with the development plan. He saw no reason why the Society should diminish its efforts, but hoped the plan when completed might be found to serve as useful a purpose as a comparison between the artist's plan of Paris and that adopted by Baron Haussmann would show the former to have done. He would be greatly surprised if another generation should allow the iron bridge at Charing Cross to stand. He described the new arterial roads under consideration, and expressed his satisfaction that the conferences between the local authorities at the Local Government Board should have been so successful. These were the direct result of the deputation by this Society and others to the Prime Minister last year.

Prudential Assurance Company, Ltd.

In the sixty-sixth annual Report of the Prudential Assurance Company for the year ending December 31, 1914, the directors state that in the Ordinary Branch the number of policies issued during the year was 65,751, assuring the sum of £6,318,843, and producing a new annual premium income of £424,353. The premiums received during the year were £5,035,625, being an increase of £115,107 over the year 1913. In addition, £10,315 was received in premiums under the sickness insurance tables. The claims of the year amounted to £4,014,658. The number of deaths was 9,351. The number of endowment assurances matured was 24,966, the premium income of which was £136,735. The number of policies in force at the end of the year was 922,505. In the Industrial Branch the premiums received during the year were £8,176,202, being an increase of £301,746. The claims of the year amounted to £3,373,850, including £398,360 bonus additions. The number of claims and surrenders, including 6,731 endowment assurances matured, was 392,883. The number of free policies granted during the year to those policyholders of five years' standing and upwards who desired to discontinue their payments was 103,514, the number in force being 1,947,556. The number of free policies which became claims during the year was 46,364. The total number of policies in force in this branch at the end of the year was 20,085,010 ; their average duration exceeds thirteen years. The assets of the company, in both branches, as shown in the balance-sheet, are £91,202,344, being an increase of £4,209,341 over those of 1913.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Viscount Peel, Chairman, presiding.

Tenders.—Tenders were received for the supply of paints, colours, varnishes, etc.

District Surveyor.—In a Report received from the Building Acts Committee it was stated that Mr. Alfred Conder will retire from the office of District Surveyor for the district of Greenwich and Woolwich as from April 8, 1915.

Proposed Extension of Woolwich Sub-Station.—On the recommendation of the Highways Committee it was agreed that tenders be invited from selected firms for (1) the execution of certain building works at the Woolwich sub-station, and (2) the provision and laying of additional cables required in connection with the working of the Council's tramway.

Peckham Rye Park.—It was agreed, on the recommendation of the Parks and Small Holdings and Allotments Committee, that so far as the Council can legally do so a strip of land about 59 sq. yds. in extent, forming part of Peckham Rye Park at the corner of Straker-road, be surrendered for addition to the public roadway, subject to the Camberwell Borough Council paving and maintaining the land to the satisfaction of and free of cost to the Council.

Votes of Thanks.—During the meeting votes of thanks were moved to the Chairman, Vice-Chairman, and Deputy-Chairman of the Council on the occasion of their retiring from office, having completed a year's service in their respective positions.

Brantham Court, Suffolk: Staircase Hall.

Mr. W. Harold Hillyer, Architect.

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ILLUSTRATIONS.

Houses in Vale-Avenue and Mulberry-Walk, Chelsea.

THESE houses have facings of grey bricks, with red dressings, from Messrs. Collins, of Reading. The roofs are covered with red tiles, supplied and fixed by Messrs. Roberts, Adlard, & Co. The elevations are designed in one style, but with considerable variation, obtained by the exigencies of the planning, which gives a picturesque result reminiscent of the old work in Chelsea. The projecting gable to the house at the lower end of Vale-avenue is of timber to suit some interesting old windows of Russian design which are worked in in the side elevations. WILLIAMS & COX.

Brantham Court, Suffolk.

THIS house was completed in December last for Lady M. M. Owen-Mackenzie, and stands on high ground situate midway between Colchester and Ipswich.

The drawings illustrated are of the south garden front and a detail of the entrance courtyard, and were exhibited in last year's Academy.

The photographs are of the staircase hall and the fireplace end of the Trophy Ballroom, showing the Gallery-room over. This room is to be eventually finished in oak panelling, with a decorative plaster ceiling. The contractors were Messrs. George Dobson & Sons, of Colchester. W. HAROLD HILLYER.

Drawings of Perugia and Arles.

WE give two reproductions of drawings made by Mr. D. C. Bluett on a recent tour in the South of France and Italy.

MEETINGS.

FRIDAY, MARCH 12.

Royal Sanitary Institute.—Mr. Walter Scott on "Details of Plumbers' Work." 7 p.m.

Leicester and Leicestershire Society of Architects.—Address by Mr. Geo. Nott, entitled "Some Recent Architecture in North America." 8 p.m.

Town Planning Institute.—Address by Mr. Thos. H. Mawson, entitled "Some of the Larger Problems of Town Planning." 8 p.m.

Architectural Craftsmen's Society, Glasgow.—Mr. John Ednie on "English Renaissance Furniture." 7.45 p.m.

SATURDAY, MARCH 13.

Royal Sanitary Institute.—Inspection and demonstration at the Metropolitan Water Board Works, Hampton. 2.30 p.m.

MONDAY, MARCH 15.

Royal Institute of British Architects.—Mr. James Williams on "English Monuments." 8 p.m.

Royal Society of Arts.—Mr. M. H. Baillie Scott on "House Building: Past and Present." (Lecture I.) 8 p.m.

Royal Sanitary Institute.—Mr. W. C. Tyndale on "Calculations, Measurements and Plans, and Sections." 7 p.m.

University Extension Lecture (at the Victoria and Albert Museum).—Mr. Banister Fletcher on "Spanish Mediæval Architecture." 4.30 p.m.

WEDNESDAY, MARCH 17.

Carpenters' Company.—Mr. Banister Fletcher on "Reims—a Typical French Cathedral." 7.45 p.m.

Royal Sanitary Institute.—Mr. W. C. Tyndale on "Sanitary Appliances." 7 p.m.

THURSDAY, MARCH 18.

Royal Institution of Great Britain.—Mr. Aubrey Strahan on "The Form and Structure of the London Basin." 3 p.m.

University Extension Lecture (at the British Museum).—Mr. Banister Fletcher on "S. Sophia, Constantinople." 4.30 p.m.

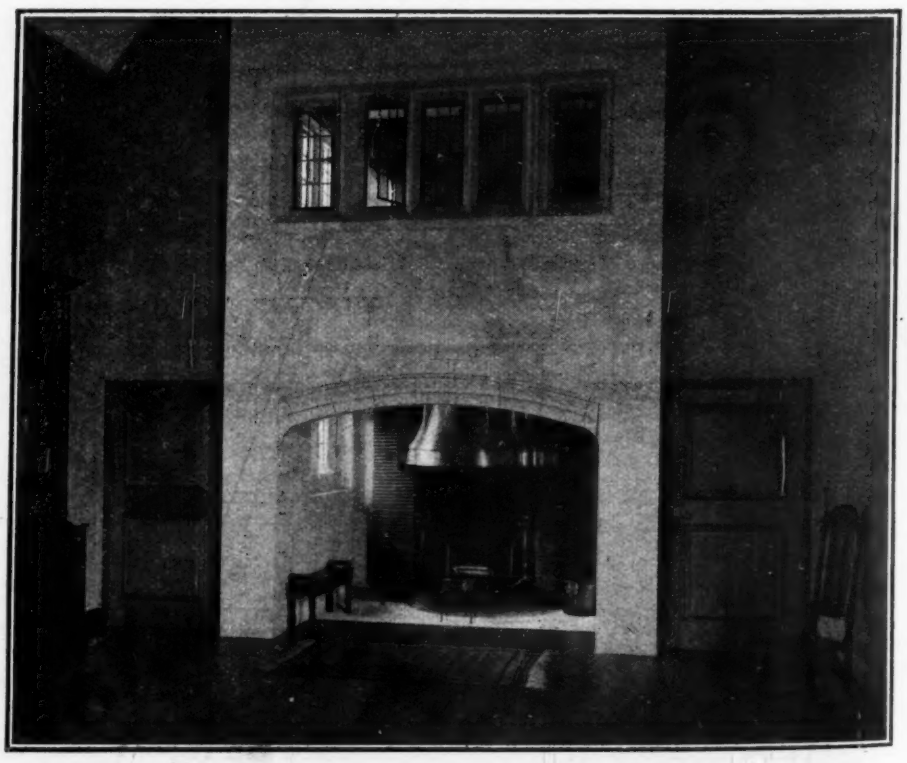
Society of Antiquaries.—Ordinary meeting. 8.30 p.m.

FIFTY YEARS AGO.

The Progress of the Sewing-Machine.

THE history of the inventor of the sewing-machine is a most curious and interesting one. The name of this man is Elias Howe. He was a mechanic of New York. Not succeeding well with his effort of ingenuity in America, he came to England, and sold his patent right in this country to Mr. Thomas, of Cheapside, for £250. Mr. Thomas, some time later, paid £2,000 to a person who made some improvement in the feeding apparatus. Howe was engaged by Mr. Thomas at a salary of £3 a week to adapt the machine to the stay-making trade. About this time the inventor had fallen into such extreme poverty that his family were destitute of the necessaries of life; but, fortunately, he had not disposed of his patent rights in America; to that country he returned; and it is stated that the royalty which he now reaps from home sale and for exportation amounts to £50,000 a year.

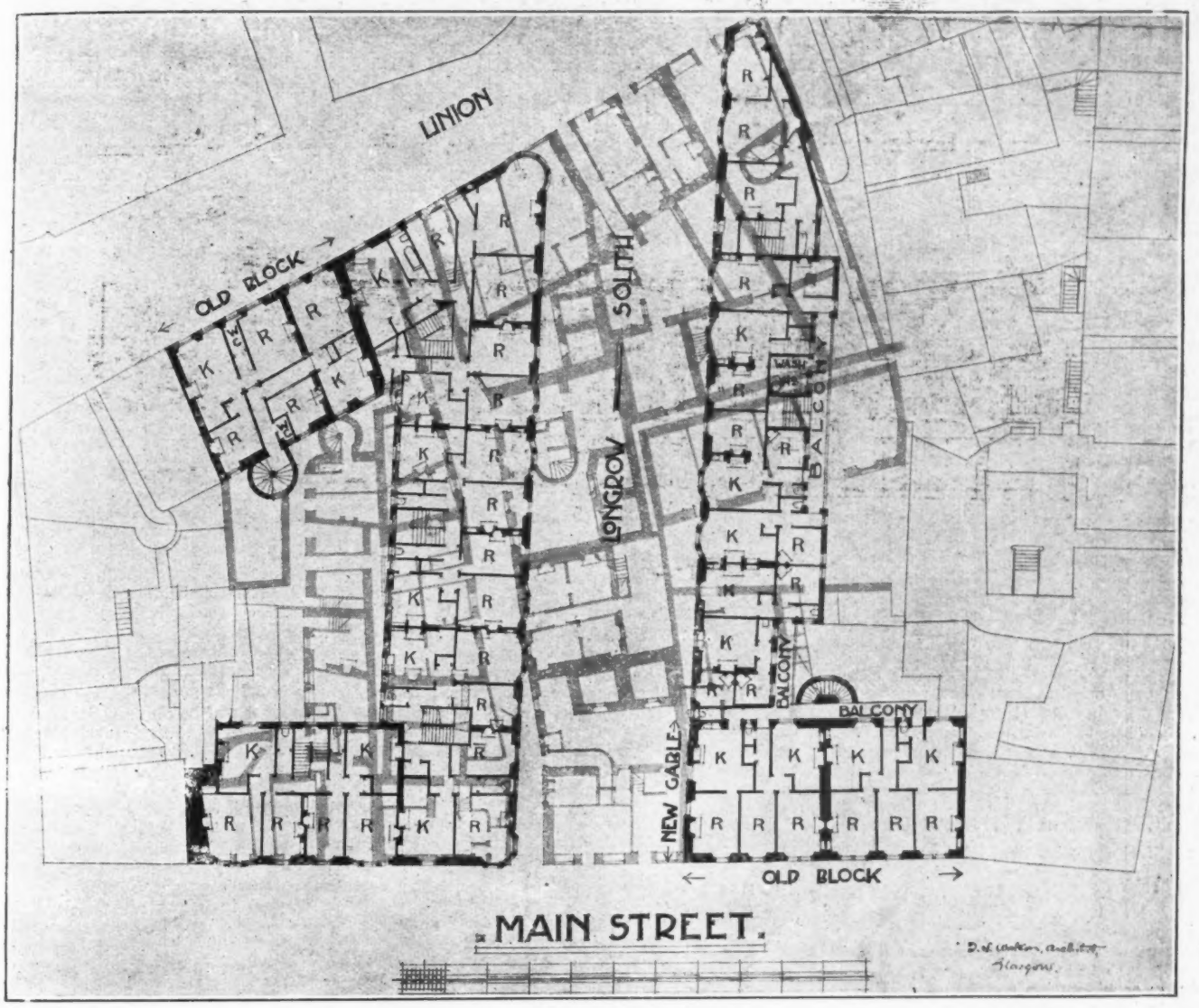
[*** We give the above extract from the *Builder* of March 11, 1865.]



Brantham Court, Suffolk: Fireplace end of the Trophy Ballroom showing the Gallery-Room over.

Mr. W. Harold Hillyer, Architect.

CIVIC DESIGN SECTION.



Town Improvement, Campbeltown.

NOTE.—The lighter tint shows the old buildings removed.

THE CARPENTERS' HALL LECTURES:

CHELSEA ANTIQUITIES.

"CHELSEA ANTIQUITIES" was the title of an interesting lecture, the seventh of the present course of lectures on the Arts Connected with Building, delivered by Mr. Walter Godfrey at Carpenters' Hall, London-wall, on the 3rd inst. Chelsea has only within recent years become an integral part of London. In past centuries it was one of the most picturesque of riverside parishes; but it still possesses an unusual individuality and charm, as well as great historical traditions. But the old water-side wall guarding the boat-littered waterside has given place to the embankment which effaces boundaries and joins it to Westminster. The Thames has lost its gay traffic, and is spanned by three modern bridges, the arteries from which lead all traffic away from its once busy shores.

The boundaries of Chelsea are easily given. To the east was the West Bourne, a stream which is now underground, but is not far distant from Sloane-street, and the western limit was marked by a stream flowing into Chelsea Creek. The old landward approach towards the village was by Church-lane, which ran from north to south through the centre of the parish, and was bisected by a later highway, the King's private road running from east to west; but until the time of Charles II. this was merely a track across the fields.

Mr. Godfrey pointed out that Sir Thomas More may be said to have discovered Chelsea, and drew fame to her by the reflection of his own greatness. He spent fourteen years in Chelsea building himself a charming Tudor house, with a walled garden, terrace, and summer-house, where he entertained Erasmus and Holbein, who has left some delightful sketches of More in the midst of his family life.

His house was in the western part of the parish, near the site of Battersea Bridge. The lecturer gave a description, illustrated by slides, of the metamorphosis of More's house, which was altered since the Chancellor's time for noblemen of diverse character and ambition, from Henry VIIIth's, Paulet, Marquis of Winchester, to James Ist's, Villiers, Duke of Buckingham. But the main alterations were made by Sir Robert Cecil, the builder of Hatfield.

Arch House, the Church, and other Chelsea antiquities were described and shown by Mr. Godfrey, who also mentioned the Chelsea Physic Garden, which was originally the Botanic Garden of the Apothecaries' Company, and still thrives in spite of its envelopment by streets and houses. It is interesting to note that the site was first secured as a suitable position for the Apothecaries' Company's Barge House. The plants from the company's older garden in Westminster were removed to Chelsea, and benefited from the change of air.

Mr. Godfrey spoke with just enthusiasm of the great glory of Chelsea. Wren's Hospital, built on the site of James Ist's Theological College, which was termed "Controversy College." Few buildings have ever been more simply treated, and very few have the dignity and give the architectural satisfaction of this great conception.

The eighteenth-century developments in Chelsea were fittingly described, the speaker concluding by saying:—

"Within the last year or two the Vale has gone; the part is traversed by new roads, and Chelsea has been forced to hide yet another piece of her past history beneath the foundations of our modern London. It is not really hidden, however; the story of old days is strong enough to return, and the future will blend with the past in one long tradition. Those that have ears to hear let them listen to what the genius *loci* in every place has to tell them. The sympathetic visitor to Chelsea will find her places eloquent, and the present will seem a greater and a worthier moment when inspired by the conscious presence of the thoughts and work of those who have passed from us, but have left their memory behind."

We give in this issue some additions to "new" Chelsea which we think very well illustrate how traditions may be maintained without sacrificing the wants of the present.

TOWN IMPROVEMENT:

BURGH OF CAMPBELTOWN, ARGYLLSHIRE.

THE town improvement which we illustrate consisted in the penetration of a block of old and insanitary dwelling-houses by a street and the erection of new buildings on each side of the street. As the site is in the heart of the town the ground floor of the new buildings is devoted entirely to shops, the two upper floors consisting of houses ranging in size from two to five apartments.

Two older blocks, four stories in height, were remodelled and incorporated with the scheme as shown on the plan, while a third adjoining but detached block was similarly treated.

One of the objects of the scheme was to effect a junction between the two most important streets in the Burgh—Main-street and Longrow—and so improving the traffic facilities of the place as well as adding to its amenity.

Town Improvement, Campbeltown: New Buildings.

Mr. T. L. Watson, F.R.I.B.A. (*See page* 251.)

The scheme originated with the late Mr. Alexander Fleming, of Messrs. William Baird & Co., Glasgow, the architect being Mr. T. L. Watson, F.R.I.B.A.

The work was done by local contractors.

RURAL HOUSING DIFFICULTY.

THE following letter, signed by an Assistant-Secretary, has been sent from the Local Government Board to Mr. Arthur J. Lees, Hon. Secretary of the Rural District Councils' Association :—

"I am directed by the President of the Local Government Board to inform you that he has had under consideration the representations of the deputation from the Rural District Councils' Association which waited on him at the House of Commons. Mr. Herbert Samuel feels that it would be impossible for him to lay down any rules which would be universally applicable in regard to the proper attitude of this Board and of the Rural District Councils in regard to the immediate provision of houses for the working classes. The cases which come before him vary too much, both as regards their urgency and as regards the probable permanence of the demand for additional houses. He recognises that houses provided now are constructed in circumstances of peculiar difficulty, both on account of the rise in the rate of interest at which money can be borrowed and also on account of the material rise in the cost of building since the commencement of the war, and he sees that these two causes must result in either increased rents or a charge upon the rates, though not usually to the extent suggested by the deputation. Moreover, as the deputation are aware, the Government are desirous of avoiding as far as possible any borrowing of money by local authorities at the present time which might be postponed. In many cases in which the President considers that a necessity for the erection of new houses for the working classes has been shown to have arisen, he would be content that the actual erection of houses should be postponed if the Council concerned showed their earnest desire to meet the situation when the circumstances became more favourable, either as regards the rate of interest or the cost of building, by obtaining approval at once of plans which could and would then be carried out. In other cases where the need for houses is very acute, and particularly where this need is urged as a reason for not taking steps for dealing with existing insanitary houses, the position is somewhat different, as the Council concerned cannot be allowed to neglect their statutory duties under the Housing Act in this respect. Again, as regards the cases in which there have been complaints under sect. 10 of the Housing, Town Planning, etc., Act, 1909, which have been, or are, found to be justified, the President would feel much difficulty in allowing postponement of action unless the circumstances were very exceptional."

Town Improvement, Campbeltown.

THE "TOWN PLANNING REVIEW."

THE January number of the *Town Planning Review* contains much interesting matter. In an editorial, entitled "Replanning Belgium," it is pointed out that both in its cities and country Belgium has always been singularly different from England, especially in that she has developed in the past and preserved in the present a much higher polity of city life, as her cities have been almost separate States, and towns have not assumed the overgrown and overburdened proportions of English industrial towns, nor have they fallen into the slough of their German neighbours in hoarding a large number of people into barrack dwellings.

The countryside is also different from England, holdings are much smaller, there is no rural depopulation, and there are seventy-five people to an acre as compared with twenty-eight in England and Wales. The editorial concludes by pointing out that the garden city movement would be breaking entirely new ground, and it is for the Belgians themselves to say whether they want it, the reply to which we imagine, will be an emphatic negative!

"Tradition and City Development" is discussed by Mr. H. V. Lanchester, and "Town Planning Architectural Style" by Mr. A. Trystan Edwards, who concludes by urging that if architects devoted themselves to civic design there would be a great accession of public interest in architecture, since the bulk of mankind is concerned with the social rather than the æsthetic aspect of life, and architecture interpreted in terms of the city immediately becomes something of interest in which everyone feels he has a part. This no doubt is what the ardent town-planner would like to believe; in reality in this country we believe it is wrong, and it is rather the individual and personal aspect of art which interests most. A well-illustrated notice of the picturesque grand' Place at Furnes, by Mr. Patrick Abercrombie, follows, and another note on Lille. Greek and Roman towns are dealt with by Mr. Bosanquet, and Mr. J. A. Brodie's paper on "The Development of Wider Roads for Cities," which was read before the Town Planning Institute, is given. Mr. S. D. Adshead contributes the sixteenth article on "The Decoration and Furnishing of the City," which treats of trees, and from his interesting article we quote the following passage :—

It may come as a surprise to some to be told that previously to 1850 the planting of trees in the built-up streets of towns was practically unknown. Those tree-planted streets and boulevards of historic fame such as the Boulevard des Italiens in Paris are, as a matter of fact, streets which have gradually enveloped previously tree-lined avenues bordering open land. The idea of planting tree-lined avenues, of which one of the earliest examples was the Cour de la Reine in Paris, laid out by Marie de Medicis in 1616, seems to have been a development of the practice of bordering with trees the parterres of the early French Renaissance and Italian gardens. When Bullet and Blondel razed the fortifications of Paris and converted them into tree-lined boulevards in 1676, they instituted a system which was rapidly followed by all other important cities of Europe whose artistic relation with Paris was sufficiently close.

From this time and up to the middle of the eighteenth century tree planting was confined to encircling boulevards, gardens, and avenues leading forth from towns. Later, however, Alphand, working in conjunction with Haussmann, who converted practically the whole of the formal parks and gardens of Paris into bijou rural retreats, modelled on the most picturesque examples of natural woodland scenery, instituted the practice of planting trees in built-up streets, and founded a School of Landscape Art, the influence of which spreading throughout Europe, soon completely annihilated all previous methods based on formal design.

A reference to Turgot's plan of Paris, prepared at the latter end of the reign of Louis XIV., shows a tree-lined avenue surrounding Paris like a leafy screen, separating the town from the open country beyond. It also shows the Champs Elysées with its radiating avenues penetrating the country in every direction. Similar lines of trees border the Tuilleries Gardens, the Luxembourg Gardens, and the Palais Royal, but nowhere are trees shown in built-up streets. A reference to any plan of a European city prepared before the middle of last century shows similar treatments in regard to the Ringstrasse and avenues, though

in many cases encircling belts of trees have since been absorbed in the extension of the town as at Amiens.

Alphand of Paris between 1850 and 1870 was practically the first landscape gardener to contravene the formal and grandiose principles of the great Le Notre. In Berlin the tree-lined Unter den Linden, and in Turin the Corso Vittorio Emanuele are examples of avenues that have been enveloped. The planting of trees in built-up streets undoubtedly marks a decline in the art of civic design, and whilst at first their introduction was restricted to thoroughfares of extreme width it was not long before the most congested of streets were planted with them. It is not easy to explain to the amateur civic reformer that by his indiscriminate methods he often undoes the very work which he is so indefatigable in advancing. An essential principle with the great town planners of the past was to preserve as far as possible the openness of the town. We cannot overemphasise the importance of keeping our street pictures unobstructed, our open spaces cleared of obstructions, and the massed foliage of our parks unchallenged by the intrusion of ill-favoured saplings, obstructing the very places that should be kept open to enhance them. How obstructive and how irritating to the eye are the trees which have been planted on the island spaces at Hyde Park Corner in London. How one longs for the spaciousness that once characterised this place. How poverty stricken are the straggling specimens in Shaftesbury-avenue which no amount of care could ever make to thrive. But let it not be supposed that we would entirely banish trees from our towns—what we need to recognise is, that in narrow streets, in business streets, and where they obstruct a fine architectural setting, they are out of place. It would not be too drastic an assertion to state that trees should never be planted in a street the width of which was less than 80 ft., and not even then, if built up, unless we wished to hide the defects of the architecture.

Civil Engineering articles and Reviews complete the number.

A GLASGOW DEVELOPMENT SCHEME.

A LOCAL GOVERNMENT BOARD inquiry has been held at Glasgow, which has applied for the sanction of a town-planning scheme. The area to be dealt with comprises 3,800 acres, of which 2,400 fall within the city and the remainder in the counties of Renfrew and Dumbarton. The lands affected include the districts of Kelvinside, Jordanhill, Broomhill, Whitewich, Scotstoun, Yoker, Drumchapel, and Knightswood, and the areas referred to in the various applications made in the district recently, which include the eastern district of Dumbarton, the upper district of Renfrew, the burgh of Clydebank, and the burgh of Milngavie, together with the Glasgow scheme, taken together, form an area of 18,000 acres, and extend from Anniesland in Dumbarton to Milngavie on the Clyde. The general features of the schemes, as usual, include the limitation of the number of houses to be erected on any area, and the setting aside of the various areas for the purposes for which they are best suited, the provision of open spaces, and the provision of adequate traffic facilities. The details of the various schemes are yet to be settled, but when this is done the various authorities will have to confer with the proprietors concerned.

The backbone of the whole of the proposals, as to which there is already general agreement, is the provision of a main traffic road in extension of the Great Western road from Anniesland, through Duntocher and Bowling. The growth of the district traversed by this road is evident, as is also the fact that the existing Dumbarton-road is already congested, so that it would become intolerable if no relief were provided when the riverside and other works area throughout the district are completely developed. The widening of the existing main road would be impossible except at a prohibitive cost.

The specific purposes served of the new main road will be the extension of cheap tramway facilities for the travelling public, the opening up of land in the direction in which Glasgow tends to expand, while the aim of reformers to spread population over wider areas will be met by the provision of high-speed tramways. It will also serve as a link between the great industrial centres and the city's proposed recreation-ground of Balloch, while it will also remove the congestion of the Dumbarton-road.

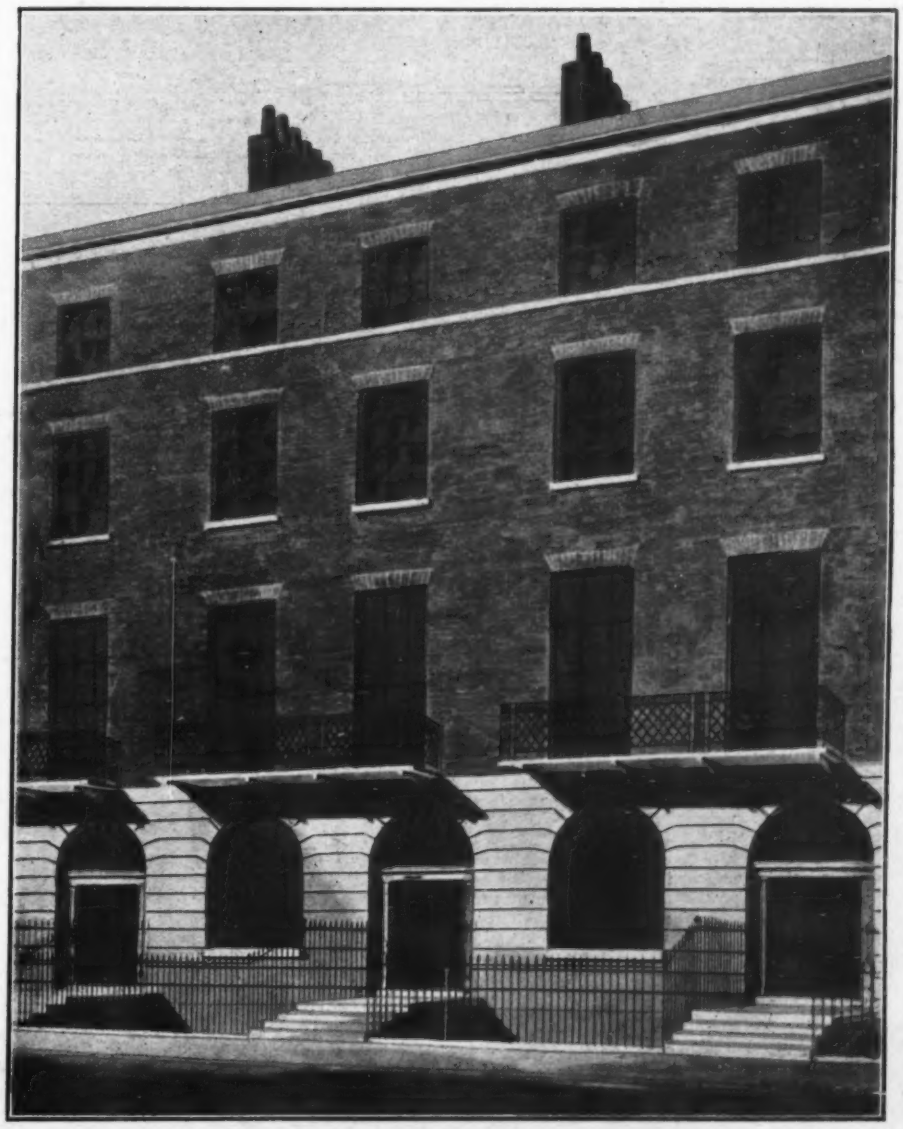
It is pointed out that the work will probably be carried out in sections, and would be eminently suitable for the direct employment of labour in case of distress due to unemployment, since a large proportion of the cost will be represented by wages, and as it is situated at the doors of an industrial district where unemployment must from time to time arise. The first section which might suitably be put in hand is from the present termination of the Great Western-road up to Duntocher, to join with the road therefrom to Old Kilpatrick.

The authorities concerned have approached the Road Board to obtain a contribution towards the cost of the new highway, who were sympathetic, but pointed out that local effort, both on the part of the authorities and owners, should be forthcoming. When this has been done the Road Board will make a contribution towards the cost. With the excellent reputation which Glasgow enjoys for successful municipal enterprise we have every reason to believe that this great scheme will prove a success.

THE BLOOMSBURY MODE:

A SECOND-RATE LONDON HOUSE.

SIR JOHN SOANE, when lecturing at the Royal Academy Schools, kept his eyes upon the vast schemes of the speculative builders who were then operating to the north of eighteenth-century Bloomsbury, Burton, the father of the architect, being the leading man of the time in this regard. The accompanying illustration shows the characteristic features of the plain, well-proportioned town houses which, grouped into terraces, form the sides of many of the larger and more recent squares. There is a great deal to be said for this type of plain, uncompromising building, and we select this example to show how the early nineteenth-century architects and builders considered formality and uniformity to be of greater value for comprehensive street architecture than dissimilar fronts to individual houses. In the Soane Collection of diagrams prepared for the Academy Lectures there are several fine drawings of Burton's projected schemes, many of which were executed, namely, the east side of Woburn-place, Cartwright-gardens, Russell-square, and other tributary streets. We have an affection for this district, which Thackeray loved and immortalised in his works. It is a district which has survived practically intact for a century; and although the unnecessary mews have been cleared away —for carriages are no longer kept—and the gigantic figure of the Bloomsbury landlady looms over the British Museum, peering towards the northern heights, the old glamour of the place remains. The west side of Russell-square is intact and the Bedford Estate exercises a paternal regard for the *genius loci*, so we are not likely to suffer from a repetition of the terra-cotta epidemic which prevailed in the late eighties.



Type of second-rate London Houses of the Early Nineteenth Century, Bloomsbury.

CIVIC REVIEW NOTES.

Town Planning at Scotstoun.

THE District Committee of the upper district of Renfrewshire and the Corporation of the City of Glasgow have both asked the Local Government Board for authority to apply a town-planning scheme to the area lying between Victoria Drive, Scotstoun, on the east and the boundary of the burgh of Clydebank on the west. The area is about 840 acres in extent. It has a river frontage of 1¼ miles on the south, and is bounded on the north by the county of Dumbarton. The district includes several industrial works, and the authorities are agreed that it is likely to be much further developed in that direction and also as a residential area.

Town-Planning Schemes.

IN the House of Commons recently Mr. Herbert Samuel (President Local Government Board), in reply to Mr. Outhwaite, said the number of town-planning schemes made by local authorities, and finally approved by the Local Government Board, was four. Three other schemes had been made by local authorities and submitted to the Board for approval, and the Board had authorised ninety-one other schemes to be prepared. It might roughly be estimated that the area of land comprised in town-planning schemes approved or in contemplation was equal to about half the area of land already built upon in England and Wales. He had no information with respect to the number of houses built or to be built in connection with these schemes. The schemes did not require the erection of houses, but limited the number of houses to be erected on particular areas. It rested with the owner of the land within the area of the schemes to decide when building should take place, and, subject to the restrictions referred to, what number of houses should be erected.

No. 70, NEW BOND-STREET, W.

MR. L. F. ROSELIEB, R.B.S., 4, Avenue Studios, South Kensington, has been commissioned to execute the two sculptured figures, Art and Commerce, 8 ft. high, to the Sicilian marble pilasters of the front of this building. Messrs. Palgrave & Co. are the architects. The modelled and enriched three-tier bay in bronze has been entrusted to the Birmingham Guild, Ltd.

LAW REPORT.

COURT OF APPEAL.

(Before the LORD CHIEF JUSTICE, Lord Justice SWINFEN EADY, and Mr. Justice BRAY.)

Builder's Appeal Fails:

Holding *v.* Banks.

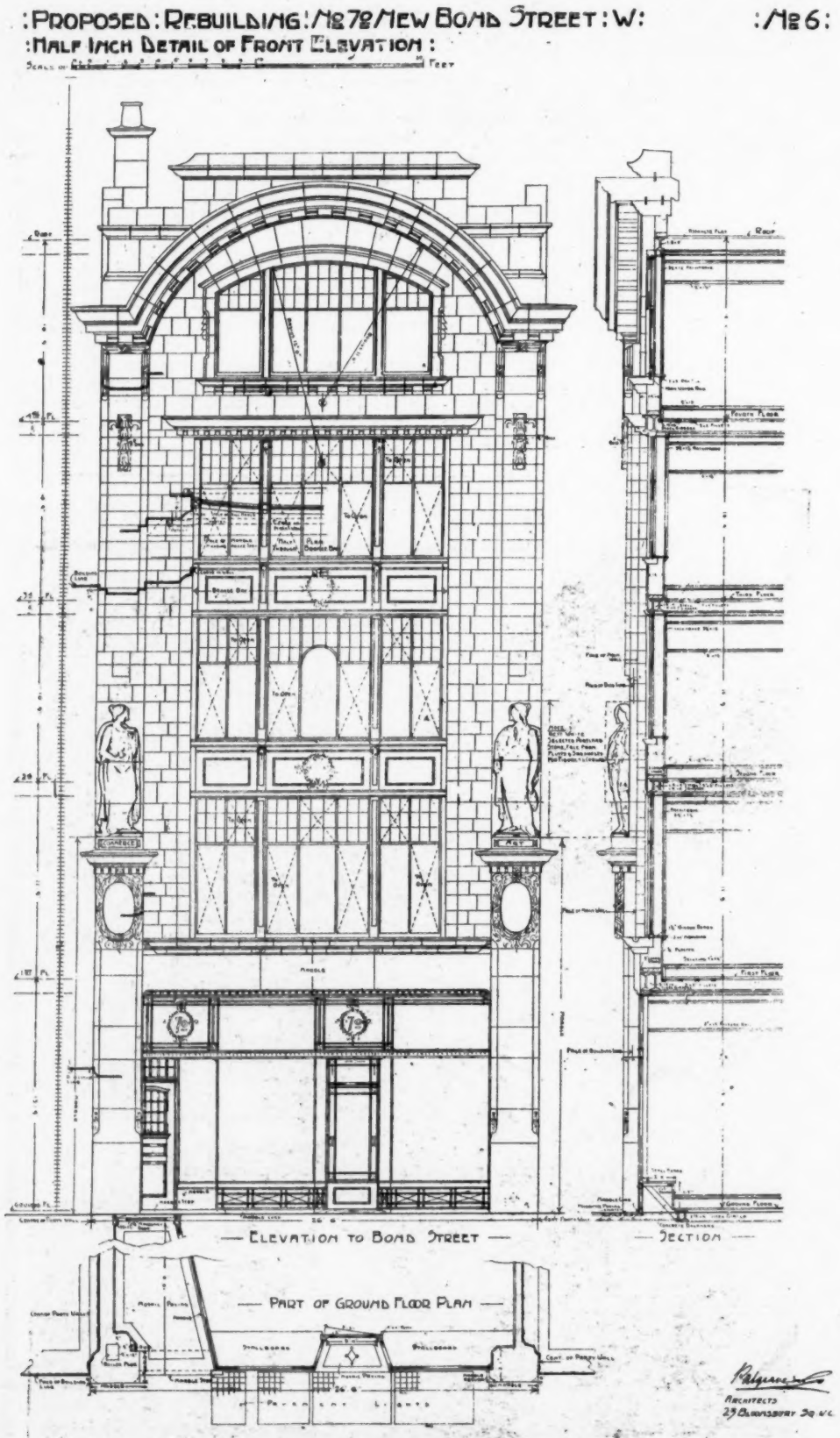
ON Friday last week the Court heard the appeal of Mr. John Joseph Holding, builder, of Willesden, from a judgment of Mr. Justice Sankey, in the King's Bench Division. This was Mr. Holding's second appeal, the Court in the first instance having ordered a retrial of his action on the ground that Lord Justice (then Mr. Justice) Phillimore had misdirected himself on the law. The defendants were Messrs. E. J. S. Banks & F. S. Banks, and the plaintiff claimed damages for work done and materials supplied, and also sought to recover money due on a certificate.

Mr. Holding, who appeared in person, said he claimed £385 and interest until payment of the debt in respect of an architect's certificate for building work done on the defendants' behalf, and £356 for other work done and material supplied in connection with a building contract. Both Mr. Justice Phillimore in the first trial and Mr. Justice Sankey in the second had entered judgment for the defendants, but in the last trial he (plaintiff) was awarded £5 damages for illegal trespass on the part of the defendants. Mr. Holding argued that the Judge had gone wrong on the facts, and that he (the plaintiff) should have judgment.

Mr. Shakspeare, appearing for the respondents to the appeal, said the dispute arose out of a contract by the plaintiff to build some houses and shops for the defendants at Willesden. The facts would be best gained from the summing-up of Mr. Justice Sankey, from which it appeared that Mr. Holding, in addition to claiming sums already mentioned on a certificate and for work done and plans and materials supplied, asked for damages for an alleged wrongful trespass on the building site and premises by the defendants. Messrs. Banks denied liability, and they counter-claimed for damages which had been incurred, they said, because the work done was not up to the contract. The Judge, however, nonsuited the plaintiff on his first two heads of claim, and gave him £5 for the wrongful trespass, holding that the defendants had been guilty of a technical offence. The defendants, said counsel, alleged that the certificate was obtained by fraud, and the judgment of Mr. Justice Sankey upheld that. The suggestion was that Mr. Holding did not disclose the fact that two summonses were issued against him by the local authority for alleged breach of the building rules. With regard to the claim for work done, the defendants said that work was of no value, and that the plaintiff ended the contract by his conduct, which was that he refused to comply with the requirements of the District Council. The Judge found for defendants on that issue.

In reply, Mr. Holding said the work done was valued by independent surveyors at £738 and £740 respectively. The evidence showed that £385 was due to him on the certificate. He admitted he did not proceed with the work, but that was because the defendants' plans were wrong.

The Court dismissed the appeal with costs, the Lord Chief Justice remarking that the decision of the Judge was on the facts, and the Court saw no reason for interfering with that decision.


:PROPOSED: REBUILDING: Nº 78 NEW BOND STREET: W:
:HALF INCH DETAIL OF FRONT ELEVATION:
— ELEVATION TO BOND STREET —
— SECTION
— PART OF GROUND FLOOR PLAN —
ARCHITECTS
23 CHANCERY LANE W.C.

No. 70, New Bond-Street, London.

Messrs. Palgrave & Co., Architects.

THE COURT OF COMMON COUNCIL.

A MEETING of the Court of Common Council was held on the 4th inst., when the following amongst other matters were dealt with:—A Report was received from the Sanitary Committee with regard to the Order of the Local Government Board sanctioning the Cloth Fair Reconstruction and Improvement scheme, recommending that notice to treat be served upon all the parties having interests in the lands proposed to be taken, and that the Committee be authorised to take any further steps that may be necessary to carry the Order into effect. This was agreed to.—A letter was laid before the Court from the Metropolitan Water Board stating that Clause 48 (power to cut off supply on notice of discontinuance or removal of consumer, and to recover expenses) and Clause 49 (consumer to pay expenses of reconnecting discontinued supply) have been withdrawn from their Bill now before Parliament. This was referred to the County Purposes Committee.—A letter was received from the Secretary of the International Garden Cities and Town Planning Association, enclosing a resolution of thanks of Belgian architects for the grant of the use of the Council-chamber.

NEW COMPANIES.

THE undermentioned particulars of new companies recently registered are taken from the Daily Register compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, Chancery-lane, W.C.:—

ANGLO-COLONIAL INVESTMENTS, LTD. (139,462). Registered February 25. To acquire by purchase, lease, or exchange, or otherwise, land and buildings, and to turn same to account by preparing building sites and by constructing, reconstructing, altering, furnishing, and maintaining flats, houses, factories, warehouses, shops, etc. Nominal capital, £1,000.

MANCHESTER TRADES SUPPLY COMPANY, LTD. (139,441), 41, Lower Mosley-street, Manchester. Registered February 23. Builders', contractors', and plumbers' merchants, sanitary and electrical engineers, land, estate, house, and insurance agents, etc. Nominal capital, £1,000.

A. COX & SONS, LTD. (139,381), Victoria-road, Abingdon-on-Thames, Berks. Registered February 18. Builders and contractors and manufacturers of and dealers in bricks, tiles, drain, and other pipes, pottery, hardware, and general building requisites. Nominal capital, £6,000.

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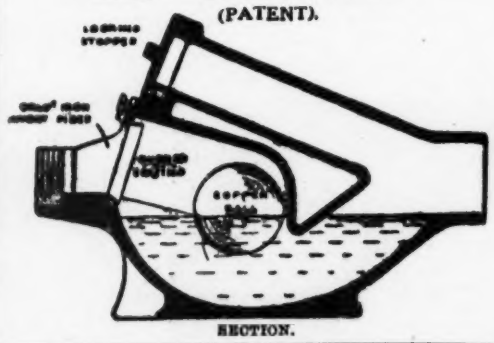
DOULTON'S ANTI-FLOOD TRAPS.

Back pressure of water forces the floating copper ball against the india-rubber seating, and thus flooding is automatically prevented.

The "Anti-Flood" (PATENT).



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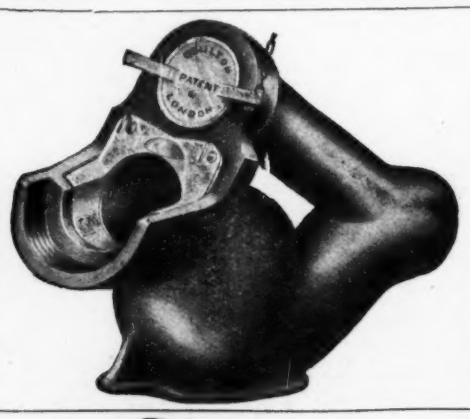


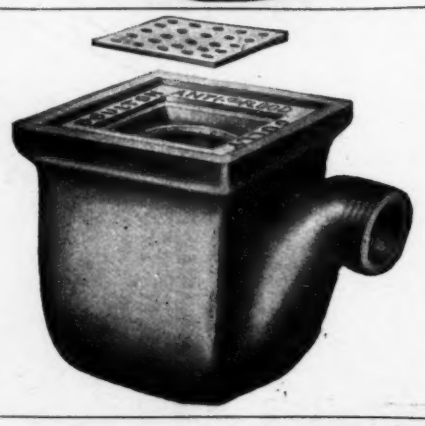
DOULTON'S Glazed Stoneware BALL-VALVE INTERCEPTOR.

A special feature of this pattern is that, by lifting out the metal invert piece, the india-rubber seating and also the ball can be removed.

Access thus being obtainable from the front, the interceptor is fixed in the same position as would be occupied by any ordinary channel interceptor.

DOULTON'S Glazed Stoneware BALL-VALVE GULLY.

The india-rubber seating is secured by a metal ring, which is readily removed by releasing two screws. The removal of the ring permits both the seating and the ball to be lifted out, and replaced, without disturbing the iron top of the gully.



"The Thames."

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SECTION.

DOULTON & CO., LTD., LAMBETH, LONDON, S.E.

H.D. 62.

THE BUILDING TRADE.

BUILDERS AND GAS ENGINEERS.

AN old-fashioned saying has it that "fools build houses and wise men live in them." This may have been true when it was first said, somewhere about the time of Cain and Abel. It is certainly misleading now. The chief fallacy underlying the statement is the fact that it is rather women than men who live in houses. Men come home from their work to feed and to sleep, but their working life is spent elsewhere. Woman's working life—at any rate the average married woman's working life if she has a young family—is to a great extent spent in her home. It may not have mattered much to her what the house was like in the days of the patriarchs, but in this twentieth century her home work has become so complex that it needs a very wise man indeed to build a house such as she would desire.

One of the advisers that a house-builder should always keep his eye on is the gas engineer, or else he is likely to put the lady of the house that he is building to vast inconvenience and himself to considerable unnecessary expense. Kitchens fitted with inadequate gas supplies, or fireplaces built on old-fashioned principles, are a constant source of annoyance, and they could easily be avoided if a few practical points were taken into consideration before the house was built. Most important of these is the placing of ample gas-pipes in the structure—proper "carcassing."

As sanitary science has progressed greater recognition is being given every year to the necessity of smoke prevention, for no one ever loves a smoky chimney, whether the smoke comes into the house and makes it unpleasant, or comes out into the air and helps to create fog. Gas is the recognised means of preventing the evil, and gas has so far proved itself to be the only fuel that can be claimed as really smokeless. Modern gas engineering has provided means of cooking, heating, lighting, and hot-water supply that are wellnigh perfection, and it has now overcome one of the most difficult tasks of all, the disposal of refuse. As the value of these inventions is being realised, householders are insisting more and more on having them installed. They would be even quicker in getting them and making their homes truly comfortable if it were not for the difficulties of pulling good masonry and brickwork to pieces for new pipes.

Certain houses, quite newly built and decorated, such as those in garden cities and the more concentrated dwellings fixed together as residential flats, must have paint and decoration disturbed before adequate gas supplies can be obtained. It is sometimes pitiful to see new floors pulled up to insert tubes that might just as well have been included in the original design of the fabric. Of course there are many exceptions to the rule of poor gas supply, but it is really astonishing, when one comes to inspect new houses, how common it is to find no proper space for cookers or accommodation for gas-fires or water-heaters. Far more common than either of these defects is the one first mentioned, that is, small size service pipes. The predominating errors in thoughtlessly built modern houses have been summarised by a practical gas man as these:—

1. Supplies of all inadequate size.
2. Points mostly in the wrong places.
3. No supplies for a prospective geyser.
4. No supplies at the sides of hearths for gas-fires.
5. No means of disconnection other than cutting the supply in awkward places, or where possible disconnection may be needed.
6. Pipes and joints improperly tested and in some cases not tested at all, so that escapes result with all their attendant inconveniences.

Quite a number of builders are under certain misconceptions concerning gas-fires. Let us take the scientific ones first. Two bogies still exist in the minds of some people, although they have been destroyed and laid to rest by independent scientific research for a long time. There is the sulphur bogy. The gas light, and even the gas-fire at one time, were believed to give off sulphuric acid fumes that rotted furniture and book-bindings. A proof that will appeal to any business man lies in the fact that a Parliamentary Committee was so much impressed by the arguments of chemists a few years ago that the more recent acts have abolished the old restrictions on gas undertakings as to the quantities of sulphur that gas might contain. The other bogy has been that gas-fires were unhealthy. Professor Leonard Hill, of the London Hospital, has destroyed this one by his series of experiments. He showed that what human beings require to keep them healthy is cool and moving air. Even impure air, which makes men drowsy when hot and still, will stimulate them into life when brought to a comfortable temperature and kept in motion. This can be done far more efficiently by a brilliantly radiant gas-fire than by other methods. Colds in the head are as a rule not caused by draughts, but by infection. One of the most uncomfortable conditions for work of a sedentary nature is to be found in a room where cold draughts abound near the floor and hotter air in the neighbourhood of a man's head. The gas-fire warms floor and walls and ceiling as well as all objects that come within the scope of its radiation. It helps to keep a room at an equable temperature and at the same time makes the air move steadily, thus fulfilling its health-giving objects.

It might be objected by builders that they have often heard complaints about gas-fires. If all these complaints were carefully examined it would generally be found that those who complained had never taken into account such things as faulty chimneys and faulty fixings. No one is really to blame. Of course the architect might possibly have consulted a gas engineer. The lady who desires good cooking might have asked advice from the London University School of Economy. The kitchen-maid might (but this is a difficult subject) learn in some school how to handle pots without over-much breakage.

Glance back through that last paragraph and you will see that it touches the happiness of many lives. We are all liable to lay the blame of the shortcomings of our best work on someone else—the builder, and the architect, and the housewife—and the poor man who has to use all his ingenuity to make up for other people's lack of forethought gets into trouble.

It could be put right if we all worked together. If a builder asked a gas engineer what were the exact requirements of his neighbourhood and how best to adapt his constructive skill to meet any new demands that modern science would make on him, much trouble might be saved.

But gas engineering is one of the most complicated of modern professions. There is no need for a builder to worry about the cost of employing great experts. It can all now be done by the British Commercial Gas Association, a co-operative and representative body which places experts at the service of architects, builders, and property-owners free of cost.

THE ACQUISITION OF ENEMY PATENTS.

THE following list of British patents, which have been granted in favour of residents of Germany, Austria, or Hungary, is furnished in view of the new Patents Acts, which empower the Board of Trade to confer upon British subjects the right to manufacture under enemy patents, *which right, when acquired, can be retained after the war*, and is specially compiled for the *Builder* by Mr. Lewis Wm. Goold, chartered patent agent, 5, Corporation-street, Birmingham. It is desirable in the first instance to obtain the latest particulars upon the Patents Register. If any patent listed has been assigned to a non-enemy proprietor, the law does not apply:—

6,913 of 1912.—Brick-cutting machines. Automatic brick-cutting machines, having a reciprocating cutting carriage: J. Riedemann, Germany.

6,970 of 1912.—Door closers and checks. Door closers and checks of the type in which the position of the check action and the tension of the spring can be regulated from outside the casing are provided with an indicator mounted on the exterior of the crank axle for altering the angular position of the crank and thereby controlling the amount or period of the check action without altering the tension of the closing spring: Vereinigte Turschliesserwerke, A. Basturba-Meteor und Eos-Komet, Ges., Berlin. Dated March 31, 1911.

7,838 of 1912.—Gluepots. A vessel suitable for use in making confectionery, or as a gluepot, consists of an outer double-walled vessel with insulating material, such as cork meal, between its walls, and an inner vessel suspended by a flange in the upper part of the outer vessel, the flange preferably resting on a ring of asbestos, etc., and preventing the escape of steam. Hot water or the like is placed in the lower part of the outer vessel for heating or keeping hot the contents of the inner vessel. Conduction of heat between the inner and outer walls of the outer vessel is prevented by interposing a rubber or like ring between the upper part of the outer wall and a flange at the upper end of the inner wall: Thermos-Akt.-Ges., Berlin. Dated September 9, 1911.

8,001 of 1912.—Moulding concrete beams. Beams of T or I section are moulded between shaped side plates spaced apart by means of ferrules and secured together by bolts: W. Turk, Germany.

8,053 of 1912.—Treating air for ventilation, cold-storage, etc. Air for ventilation, cold-storage, and other purposes is purified and cooled by passing it successively through a layer of wet, porous material, saturated with a disinfecting or deodorising solution, a layer of broken ice, a layer of dry, porous material, and finally through gauze, flannel, loose felt, or other filtering media: W. Morawska, Germany.

8,088 of 1912.—Posts. A ferro-concrete pole for supporting electric conductors: P. Rose and A. Oldenburg, Germany.

8,173 of 1912.—Windows. Relates to windows which slide down into a casing, and in the closed position are forced against packing material on the fixed frame by means of an auxiliary pressure frame. The present invention comprises means for separating the sash, when opened, from the packing material, and for lessening the friction between the sash and pressure frame: E. Sebestyen, Budapest.

8,194 of 1912.—Varnishes. Varnishes and lacquers consist of Chinese wood oil, together with terpenes, terpene derivatives, such as terpineol, or essential oils containing terpenes, having a minimum boiling-point of 170 deg. C., or with turpentine oil, pin oil, etc., which have been oxidised, as by exposure to air. Driers, fatty oils, resins, etc., may be added: A. Cohn, Germany. Dated February 6, 1912.

8,200 of 1912.—Glazing windows. Putty is prevented from flowing or sliding off the bars of window-frames, etc., by inclined grooves or ribs, which cause fresh putty to tend to move towards the glass: A. Packscher, Berlin.

8,403 of 1912.—Door-operating appliances. A door is opened and closed by an electric motor, the circuit of which is closed or opened by a switch operated by the door latch: A. Hohne and H. Krake, Germany.

8,420 of 1912.—Door-closing apparatus: C. Tacke, Germany.

8,488 of 1912.—Lathing; metallic fabrics: O. Rechnitz, Germany. Dated December 8, 1911.

9,474 of 1912. Vices. A quick adjustment vice is provided with a movable back jaw, in which a rack is mounted, suitably on an eccentric spindle, so as to be readily lifted out of engagement with the worm by a handle. J. Manegold (Nachfolger), Germany. Dated May 22, 1911.

9,757 of 1912.—Safes, strong-rooms, etc. Safes, strong-rooms, money-boxes, etc., are protected against the action of the oxy-hydrogen flame by encasing them with plates of nickel: J. Baudenbacher, Germany.

9,845 of 1912.—Signs, etc. A letter and its shade portions are cut out of a glass plate. A coating of glass enamel is applied to the upper surface of the letter, excepting the shade portions, and a coating of a different colour is applied to the underside of the shade portions: R. Grabe, Germany.

10,112 of 1912.—Wrenches, adjustable pipe tongs, etc.: H. Zerver (firm of), Germany. Dated March 14, 1912.

10,115 of 1912.—Screw-drivers. Screw-drivers are provided with hollow sides near the forward edge in order to afford a better grip in the slit in screwheads: A. H. Eicken, Germany.

10,332 of 1912.—Door checks. A door check comprises a lever pivoted to the door and adapted, when the door is slammed, to turn upon its axle by centrifugal force, so that a spring carried by the lever engages an abutment on the door frame to check the door,

after which the lever returns to its normal position, so that its spring can engage a second abutment to check slightly the final closing movement: W. Hulsen, Germany.

10,421 of 1912.—Cleaning chimneys. Chimneys are cleaned by the ascent and descent of a brush throw up the chimney by means of a spring: O. Latzsch and O. Latzsch, Germany.

10,436 of 1912.—Baths. The outline of fitted baths is rectangular in plan with slightly rounded corners, and the edge of rectangular flange is slightly curved downwards, in order that the bath may be let into the wall by any of its sides, or cased in, or left to stand free: Moll & Rohwer, Germany. Dated June 27, 1911.

10,547 of 1912.—Building-slabs, etc. In making cork building-blocks, slabs, etc., for use in constructing barracks, etc., the cork particles are filled into frames of wood, metal, etc., which become united to the cork and form an integral part of the block. The frame may be divided into bays, and reinforcements may be inserted. In carrying out the process the cork is filled into a frame covered on both sides with a pervious plate, such as a perforated or reticulated plate, or on one side with an impervious plate, and the cork is impregnated with pitch, etc., by dipping. After draining off excess of binding liquid, the block is dried and the covering plates are removed: Kleiner & Bokmayer, Akt.-Ges. fur Patentierte Korksteinfabrikation und Kork-stein-Bauten vorm., Vienna. Dated January 4, 1912. Addition to 10,546 of 1912.

10,602 of 1912.—Moulding concrete, etc. A shaking machine for consolidating concrete, artificial stone, and like blocks, etc., comprises a table supported upon legs furnished with projections, which are alternately engaged by a beam pivoted to a foundation and rocked by an eccentric. The beam comprises a pair of channelled bars, which embrace the legs and constitute guides therefor: Geb. Friesecke, Berlin. Dated May 18, 1911.

10,710 of 1912.—Window fastenings. A casement window is secured at top and bottom by fasteners operated through rods from the central handle: J. Weicht, Saxony.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

ABERDEEN.—Plans passed:—Alterations to underground rooms at the Court House Buildings, for the County and Municipal Buildings Commissioners, per Messrs. Kelly & Nicol, architects; dwelling-house, Fraser-road, for Messrs. George Gordon & Co., Ltd., timber merchants, per Mr. John Rust, architect; dwelling-house, Oakbank Industrial School, for the Governor, per Messrs. Jenkins & Marr, architects; office at rear of Nos. 96-100, Victoria-road, for Mr. A. P. Wallace, chemist, per Mr. George Watt, architect; four dwelling-houses on the north side of Ashley-gardens, for the Northern Gardens Suburbs, Ltd., per Messrs. D. & J. R. M'Millan, architects; additions and alterations to premises on the south side of Charles-street, for Mr. Robert Gordon, packing case manufacturer, per Messrs. Brown & Watt, architects; alterations in connection with premises on the south side of Union-street, for Messrs. Pratt & Keats, drapers, per Messrs. Kelly & Nicol, architects; addition to Comb Works, Berryden-road, for the Aberdeen Comb Works Company, Ltd., per Mr. William S. Boice, engineer.

Aberystwyth.—The R.D.C. have passed plans of two new houses at Upper Borth, for Mrs. Williams, Eltham, and Mrs. Williams, Bryn-owen-terrace.

Ashley Heath.—The site for a new sanatorium which is to be erected by the Cheshire C.C. in conjunction with the Potteries Federated Council and other authorities under the tuberculosis section of the Insurance Act has been fixed at Ashley Heath. The site is 240 acres in extent amongst pine woods, and is thirteen miles from the Potteries and six from Market Drayton.

Banbury.—The T.C. have passed plans for alterations to premises of Mr. S. C. Miller in Fish-street, and for two houses in Bloxham-road, for Messrs. Humphris & Sons. The R.D.C. have passed plans for alterations and additions to the cottage at Sibford for Mr. Frank Lascelles, and have also decided to buy half an acre of land at Wardington for the erection of cottages.

Bangor.—The T.C. have resolved to purchase eight small houses in Kyffin-square, which it is desirable to pull down with a view to erecting workmen's dwellings on the site.

* See also our list of Competitions, Contracts, etc., on page 258.

Bexhill.—The T.C. having applied for sanction to borrow £6,500 for the erection of isolation hospital buildings at Clinch Green, a L.G.B. inquiry has been held.

Blackburn.—Plans passed:—House, Cuckoo Hall Brow, by Mr. E. Heaton, and four houses, Whalley Old-road, by Mr. C. W. Eastwood.

Boston.—House in Robins Hood-walk, for Mr. F. Peck.

Bournemouth.—Plans passed:—House, Portland-road, Messrs. Bailey & Bartlett; additions, "Danum," Talbot-avenue, Mr. H. Elliott; additions to house, corner Firs Glen and Woods View roads, Mr. J. Francis; additions, 66, Palmerston-road, Mr. B. F. Rogers; additions, 72, Charminster-road, Mr. E. T. Bradbury; additions, "Ellendale," Hinton-road, Miss Deane Webb; additions, "Criterion" Hotel, Old Christchurch-road, Mr. C. H. Cartwright; store, rear of 323, Christchurch-road, Mr. W. J. Kingsbury; library, Alum Chine-road, the Library Committee; alterations, "Manor House," Boscombe Manor Estate, Miss Gaskins; house, plot 56, Stokewood-road, Messrs. Lambert & Son; additions, "Ballards," Hawkwood-road, Mr. Jordan; alterations, Pembroke Hotel, Poole-hill, Messrs. Whitbread & Co., Ltd.; garage, Chessel-avenue, Messrs. Reynolds & Isaacs.

Bury.—The T.C. have decided to place the contract for the construction of a reinforced concrete retaining wall at the electric power station with the Bolton Stone and Concrete Company.

Carlisle.—Inquiry has been made by the L.G.B. into the application of the R.D.C. for sanction to borrow £59,250 for purposes of water supply (including the construction of reservoirs at Rosebank and Carlton-hill and the execution of certain other works in the parishes of Caldbeck and Sebergham High and Low Quarter).

Clydebank.—The Dean of Guild Court has granted linings to Mr. John Taylor builder, Giffnock, to erect eight villas of six apartments each at Melfort-avenue, Radnor Park, the estimated cost of these being £4,000, and to Mr. John Taylor, builder, Duke-street, Clydebank, to build two villas of five apartments each at Barns-street, Whiterock, at an estimated cost of £800.

Coventry.—A beginning is about to be made with the extensions to the Coventry Union Infirmary. Plans have been submitted by the B.G. to the L.G.B. providing for an enlargement of Plemont Villa, Whitley, in order to accommodate thirty additional boys.

Dewsbury.—Plans passed:—Messrs. S. Lyles, Son, & Co., Ltd., corrugated steel shed, Jilling Ing Mills, Earlsheaton; Mr. Arthur Marsden, the conversion of a house into two in Sackville-street, Ravensthorpe; and Messrs. Swire & Sons, shed, Brooklyn Mills, Ravensthorpe. The E.C. propose inviting local architects to submit designs for a school of three departments at Ravensthorpe.

Doncaster.—Provisional plans have been passed by the T.C. for new municipal buildings and a new isolation hospital. The first is estimated to cost £30,000 and the second £25,700. The schemes have to secure Parliamentary sanction.

Dublin.—The T.C. is to make an application for a loan of £56,030 for the erection of artisan dwellings on the M'Caffrey estate, the houses to be let at 7s. a week.

Dundee.—Plans passed:—Bank-street, alterations on tenement, for Mr. John S. Buchan; Dalgleish-road, cottages for Messrs. Johnston & Baxter; Strathmartine-road, cottages for Mr. Peter Gray.

Durham.—Plans passed by T.C.:—Durham B.G., for new laundry in Crossgate; Mr. A. Middleton, for conversion of a building into a dwelling-house at Leazes-lane.

Filey.—Plans passed:—Alterations and additions to 18, John-street, redeposited by Mr. R. M. Robson on behalf of Mrs. Brigham; house at the corner of Brooklands and West-avenue, deposited by Messrs. Sawdon Bros.

Gillingham.—Plans passed by T.C.:—Business premises, Station-road and Victoria-street, for Messrs. A. E. Clifford & Co., submitted by Messrs. Cobb; new roof for Marquis of Lorne public-house, Mill-road, for Messrs. Budden & Biggs, submitted by Mr. E. J. Hammond; conversion of dwelling-house, 73, Canterbury-street, into business premises, submitted by Messrs. Barden & Head for Messrs. F. A. Burningham; bungalow, Orchard-road, Wigmore, for Mr. A. Masters, submitted by Mr. F. D. Pott; new church, St. Augustine's, Rainham-road, for the Rochester Diocesan Society, submitted by Mr. Temple Moore.

Hardingstone.—The Northants justices have given Messrs P. Phipps & Co. permission to make alterations at the "Crown."

Hartlepool.—A L.G.B. inquiry has been held into a housing scheme by the T.C. In the carrying out of the scheme 290 persons will be displaced, for the present property is all to be demolished. The districts will then be laid out afresh, new and wider streets being made, and new houses erected For the present it is intended only to build thirty-four new houses at a cost of from £210 to £250 apiece, leaving the remainder of the land vacant for future development.

Heywood.—A L.G.B. inquiry has been held into the application of the T.C. to borrow £12,460 for alterations at the electricity works.

Hindley.—The Wigan County Justices have passed plans for alterations to the Palace Cinematograph Pavilion.

Hendon.—Plans passed by U.D.C.:—Motor-house, Uphill-road, Mill Hill, Mr. T. Waple; workshop and cycle-house, north-east side of Meadway-gate, Garden Suburb, Messrs. Roffey & Sons; detached house, Turner's Wood, Garden Suburb, the Hampstead Heath Extension Tenants; detached house, south side of Turner's-drive, Garden Suburb, Mr. W. Quennell; one house, west side of Uphill-road, Mill Hill, Mr. T. Puddifant; alterations and additions, Sunny-side, Bridge-lane, Hendon, Messrs. Callow & Wright; detached house, north side of Wentworth-road, Golders Green, Mr. W. H. Watts; one shop, west side Finchley-road, Mr. L. Raymond; motor garage, rear of No. 4, Hendon Park-villas, Mr. R. McDonald; pair of houses, south-west side of South-square, Garden Suburb, Hampstead Heath Extension Tenants Ltd. Plans are also before the Council for seven houses at Golders Green-road, for Mr. A. J. Edmondson; a shop in Finchley-road, for Mr. L. Raymond; and a block of shops and public-hall at the corner of Bridge-lane, for Mr. J. Gibb, jun.

Kirkheaton.—Plans of dwelling-house, for Mr. A. Jessop, at Field Head-lane, approved.

Lincoln.—Plans passed:—The Picture House Company, cafe, High-street; Messrs. Cave & Co., garage, etc., Holland's-row, Newland; Mr. A. E. Smith, alterations to premises and new shop front, 17, Sincil-street.

Marlow.—Plan of new shop in Spittal-street, for Messrs. A. E. Barnard, Son, & Co., passed.

Meriden.—An inquiry by the L.G.B. has been held into an application of the R.D.C. for sanction to borrow £3,700 to carry out a sewage disposal scheme at Fillongley.

Newcastle-on-Tyne.—A L.G.B. inquiry has been held in reference to the application of the T.C. to borrow £29,700 for the provision of baths at Heaton, Benwell, and Walker. The T.C. has decided that a new berth be provided at the east of the present quay, at a cost of £51,100, which provides for sheds, quay wall, railway, sidings, etc.

Nuneaton.—Plans passed by T.C.:—House, Broad-street, for Mr. George Cooper; two houses, College-street, for Mr. Geo. Smith; four houses, High-street, for Mr. Geo. Cooper; house, Queen's-road, for Mr. S. Wills.

Paignton.—An inquiry has been held by the L.G.B. relative to the application of the U.D.C. for sanction to borrow £920 for the widening of Preston Sands-lane.

Purton.—The Wilts E.C. have decided to provide a school for 120 children.

Reading.—Plans passed:—Bungalow in Lower Armour-road, Tilehurst, for Mr. F. Fletcher; house in Wokingham-road, for Mr. T. Hayward; house at corner of Belle-avenue, for Mr. McCarthy E. Fitt. Plans for a proposed public-house at corner of Queen's-road and George-street, Caversham, by Messrs. W. H. Brakspear & Sons, Ltd., brewers, of Henley-on-Thames, are also before the Council.

Rochester.—Plans for the rebuilding of the Cannon public-house, submitted by Mr. W. E. R. Rendall, architect, have been before the magistrates, who have, however, decided that another scheme must be submitted.

Rotherham.—An inquiry has been made by the L.G.B. into the application of the R.D.C. for sanction to borrow £402 for works of sewerage in the parishes of Bramley and Wickersley.

Sleaford.—Plans passed by U.D.C.:—New offices for the Sleaford R.D.C. in Northgate; alterations to the shop of Mr. Hickinbottom.

Southport.—A L.G.B. inquiry has been held into the application of the Corporation to borrow £9,000 for the development of part of the lagoon site as a recreation ground.

Tunbridge Wells.—The L.G.B. have sanctioned a loan of £4,155 to the T.C. for works of sewerage, and the laying of a new storm-water sewer in Molyneux Park.

Wortley.—The R.D.C. have resolved to proceed with alterations and improvements to the Tankersley Sewage Works at a cost of £1,020.

APPLICATION UNDER LONDON BUILDING ACTS, 1894 to 1909.

THE Building Act Committee of the London County Council has consented to the following application under the London Building Act:—

Marylebone, East.—Re-erection of Nos. 288-292, Regent-street, and No. 16, Great Castle-street, W. (Mr. C. T. Armstrong).

A NEW CALENDAR.

Messrs. F. Troy & Co., decorators, etc., 194 and 196, Finchley-road, N.W., have issued an attractive calendar for 1915, which consists of an excellent reproduction, by colour photography, of Conway Castle, North Wales, from an oil painting by Mr. Thomas Moran, N.A., A loose-leaf date indicator is attached to the card below the illustration.

RUNNING COSTS OF MOTOR VEHICLES.

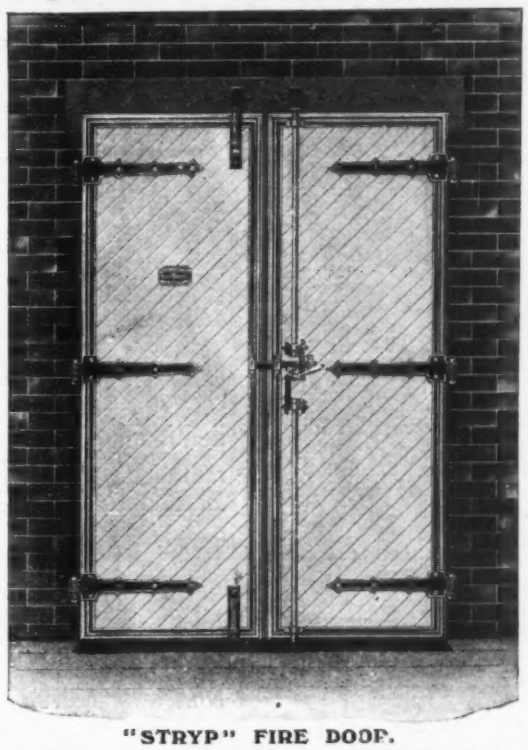
Lieut. Robert W. A. Brewer, A.M.Inst.C.E., M.I.Mech.E., F.S.E., in the course of a paper on "Running Costs of Motor Vehicles," read before the Society of Engineers (Incorporated) on March 1, stated that the problem before the automobile engineer was to transport persons and goods in a minimum of time and at a minimum cost. The second consideration was, perhaps, the more important, and could be profitably discussed from an engineering standpoint. The main head under which expenses might be classified were:—(i.) Fuel cost and consumption; (ii.) lubrication systems and consumption of fuel; (iii.) wear and maintenance; (iv.) tyres. As regarded fuel cost, it could not be said that a powerful engine was proportionately a greater fuel consumer than a similar one of less power, and the author discussed the factors producing economy in the use of fuel. The question of efficient lubrication was of the highest importance, but little progress had yet been made and further experiments were necessary.

Fire Resisting Doors.

Accepted and passed by all the British Insurance Companies.

ARMOURED Fire Doors.

Constructed of well-seasoned pine boards, planed, tongued, and grooved, and nailed together with wrought iron nails, these doors are completely covered with tinned steel sheets, in such manner that, whilst free to expand, they exclude air, and cannot become detached.



"STRYP" FIRE DOOR.

"STRYP" Fire Doors.

These doors are constructed of hollow strips of metal (each of which is free to expand and contract without distortion) and Asbestos. They are but 1½ inches in thickness, and when nicely painted have a very ornamental appearance. Their Fire Resistive Qualities are absolutely unequalled.

Considerable Reductions of Insurance Premiums are obtained when these doors are installed.

PARK WORKS, MANCHESTER.

Mather & Platt, Ltd.

QUEEN ANNE'S CHAMBERS, LONDON, S.W.

GERMAN BOMBS CANNOT "FIRE"

SAFETY is of paramount importance at the present time—that is why we lay stress on the fireproof qualities of the famous "ASBESTILITE" building material.

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THE ASBESTOS-CEMENT BUILDING MATERIAL.

Asbestilite is a scientific combination of Asbestos Fibre and highest grade Portland Cement—a material which by its nature is proof against fire, water, frost, rust, and every other destructive and corrosive agency. It is the very embodiment of durability combined with safety and good appearance, and can be had in

TILES, SLATES, FLAT BUILDING SHEETS,
all of lasting ingrained colours.

Asbestilite **hardens and toughens with age.** Not a particle of it can perish. Its powers of resistance and endurance increase with exposure. It withstands vibration of any force, and is unaffected by gases and chemical fumes, and absolutely Fireproof. **Its first cost is its only cost**—needs no repairs—so that per year of service it is the least expensive building material known. Use "**Asbestilite**" for Engine Houses, Wagon Works, Offices, Warehouses, Laboratories, and indeed every description of building that is required to last

"NOT FOR AN AGE, BUT FOR ALL TIME."

"EVERITE" CORRUGATED ASBESTOS-CEMENT ROOFING

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is made in ONE HOMOGENEOUS MASS, not in thin layers, which are extremely liable to disintegrate with exposure. *Made to British Standard 3 in. pitch*, in even foot lengths, from 4 ft. to 10 ft., in three widths from 21 in., 30 in., and 42 in. This reduces the waste in laps by approximately 50 per cent., whilst there is an obvious saving of labour in handling larger sheets. With price 25 per cent. less than competitors, "EVERITE" is at once the cheapest as well as the *most* efficient corrugated roofing extant.

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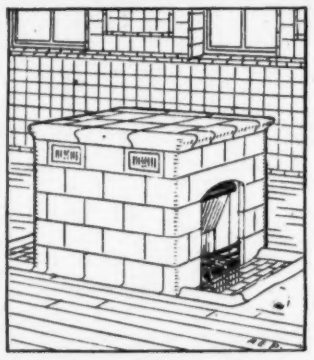
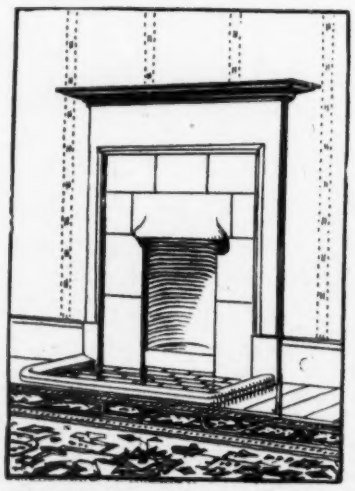
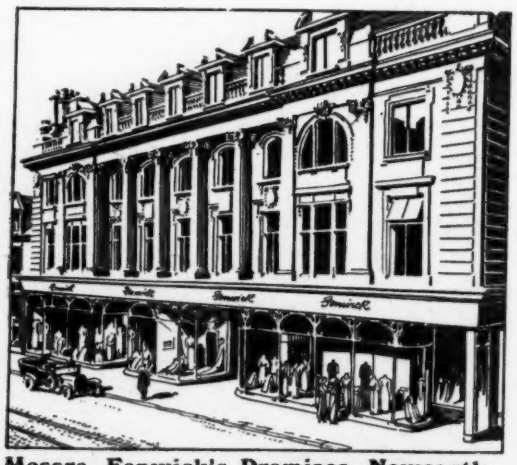


Hospital Ward Stoves with fireclay interiors.



Fireplaces & Mantels in Grey Carrara and Doulton Ware.



Messrs. Fenwick's Premises, Newcastle-on-Tyne. Messrs. Marshall & Tweedy, Archts.

Messrs. Boots' New Premises, Southend-on-Sea.
Messrs. Bromley & Watkins, Archts.

ROYAL DOULTON POTTERIES, LAMBETH, LONDON.

GENERAL BUILDING NEWS.

GRAVENEY CHURCH RESTORATION.

Graveney parish church was reopened recently, after being closed for nearly twelve months for restoration. The work undertaken, on which about £1,150 has been expended, has had to do, so far, with the fabric of the church, and this has been carried out under the supervision of Mr. W. D. Caröe. One interesting feature is the opening-up of the old timbered roof, which has been taken completely to pieces, renewed where necessary, and re-erected as it was in the fifteenth century. Another feature is the exposure of the original fifteenth-century door at the west end of the church, and the discovery of an interesting niche at the east end of the north chapel.

INSURANCE OFFICES, OLD BROAD-STREET, E.C.

New premises are in course of erection at 2, Old Broad-street, E.C., for the Ocean Marine Insurance Company, Ltd., some of the upper floors being available for other offices. The architects are Messrs. Thompson & Walford, Leadenhall-buildings, E.C. The site was cleared by Mr. B. Goodman, Dalston. The general contractors for the new building are Messrs. Trollope & Colls, Ltd., Coleman-street, E.C.; the steelwork is by Messrs. Redpath, Brown, & Co., Ltd., East Greenwich; Otis lifts are being installed; the Italian granite for the front elevation is being supplied by Messrs. J. Whitehead & Sons, Ltd., Imperial Works, Kennington Oval, S.E.; for the staircases, Art Pavements and Decorations, Ltd., Emerald-street, W.C., are responsible; the ironwork is by the Bromsgrove Guild of Applied Arts, Piccadilly, W.; and the sanitary fittings are by Messrs. John Bolding & Sons, Ltd., Davies-street, W.

NEW POLICE HEADQUARTERS, CHEADLE.

The new Courthouse and station for the Petty Sessional Division of Cheadle were opened recently. The new headquarters are centrally situated opposite the Market-place. The north side of the building has been converted into a residence for the police inspector, while the southern portion provides quarters for the police. Four new cells have been installed, and the sculleries have been converted into offices. The Courthouse is a new building, and has been erected on the site of some cottages and stables. The court itself is a spacious compartment about 50 ft. by 20 ft. There is a separate entrance to the court without passing through the main building. The approximate cost of the building is £3,000. The plans were prepared by Mr. W. J. Nevett, County Architect, and the contractor was Mr. Thos. Godwin, of Hanley.

TRADE NEWS.

The Biscovey New Schools, Cornwall, are being supplied with Shorland's warm-air ventilating patent Manchester grates by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

The Aylesbury Isolation Hospital is being supplied with the firm's warm-air ventilating patent Manchester grates.

We are informed that the walls of the police-station at Worcester, which were frequently damp, have been completely cured by a rendering of Pudloed cement.

A large flat erected at Blackpool (Shaw's Depository) was finished about nine months ago, and we understand that both contractor and architect consider the Pudloed treatment a great success.

Boyle's latest patent "air-pump" ventilator has been applied to St. Alban's Church, Hindhead.

WESTMINSTER CITY COUNCIL.

AT a meeting of the Westminster City Council held on the 4th inst., the following amongst other matters was dealt with:—

Old Compton-street.—The Improvements Committee reported that, in view of the approaching completion of the purchase of the freehold interest of No. 72, Old Compton-street, they had instructed the City Engineer to prepare drawings for the front elevation to the new building line for submission to the tenant, also specification for pulling down the front of the premises and rebuilding the same, and to invite tenders for carrying out the work as soon as the tenant has approved the plan. The Council authorised the Committee to accept the lowest tender for carrying out this work.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	9½	9½	9½	9	9	9½	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	6½	6½
Ashton-under-Lyne	10½	10½	10	10½	9	10	9	6	6	7
Barnsley	9½	9½	9½	9½	9	9	8½	7	7	7
Barrow-in-Furness	9½	10	9½	9½	9½	9½	9½	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	5½	5½	5½
Bedford	8	8	8	8½	8	9	6½	5	5	5½
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	10½	10½	10½	10½	9½	10½	9½	7½	7½	7½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	9½	9½	10	9½	6½	7	7
Blackpool	10½	9½	9½	9½	8½	9	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	6–7	6–7
Bournemouth	8½	8½	8½	8½	8½	8½	8	6	6	6
Bradford	10	10	9	9½	9½	10	8½	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	7½	7½	7½
Burnley	10	9½	9½	9½	8	9	9½	7	7	7
Burton-on-Trent	9	9	9	9	8½	9	8½	6½	6½	6½
Bury	10½	10½	10	9	9½	10	9	6	6	6
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	6½	5	5	5
Cardiff	9½	9½	9½	9½	9½	9½	8½	7	7	7
Chatham	8	9	9	9	9	9	7	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8½	8½	8½	8½	—	8½	8	6	6	6
Chester	9½	10	9½	9½	9½	9½	8½	5½	6½–6½	5–5½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10½	10½	10½	10½	9½	10½	8½	7½	7½	7½
Crewe	7	8	7½	9	8	8	7½	5	5½	6
Darlington	9½	9½	9½	10	10	9	8½	6½	6½	6½
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9	9	9	8	6½	6½	7
Dudley	8½	8½	8½	8½	8½	8	7½	5½	5½	5½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glamorgan and Monmouthshire Valleys	9½	9½	9½	9½	—	—	8½	6½	6½	6½
Exeter	8	8½	8	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	6	6	6
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9	9	8	8½	7	7	7
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9	8½	8½	9	8½	7	7	7
Harrogate	9½	9½	9	9	8	9	8½	6½	6½	6½
Hartlepools	9	10	9½	10	10	10	9	7	7	7½
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7½	8½	8	7	6½	5½	5½	5½
Huddersfield	10	9½	9½	9½	10	9	8½	7	7	7
Hull	10½	10	10	10	10	9½	8½	7½	7½	7½
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	5½	6	6
Leamington Spa	9	9	9	8½	9	8½	8	6	6	6
Leeds	10	10	10	10	9	10	8	7½	7½	7½
Leicester	9½	9½	10	10½	9½	9½	9	7	7	7½
Lincoln	9	8½	8½	9	8	8½	8	6	5½	6
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	5½
Luton	9½	8½	8½	8½	9	8½	7½	5½	5½	5½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	10	10½	10½	11	10	10	9½	6½	6½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	9	10	9½	10	10	10	8½	7	7	7½
Newcastle-on-Tyne	10½	10½	10½	10½	10	10	9	7½	7½	7½
Newport, Mon.	9½	9½	9½	9½	8½	9½	8½	6½	6½	6½
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8	8½	8½	8½	8	8½	7	5½	5½	5½
Nottingham	10	10	10	10½	9½	10	9	7½	7½	8
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9	9	9	9	9	9	7½	6	6	6
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10½	10½	10	9½	9½	10	9½	5½	6	6½
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10	10½	10	10	8½	9½	9	7	7	7½
Rochester	8	9	9	9	9	8½	7	6	6	6
Rugby	9½	9½	9½	9½	8	9½	8½	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9½	10	9½	9½	9½	9½	6	6	6
Scarborough	8½	9	8½	8½	8	9	8	6½	6½	6½
Sheffield	10½	9½	9½	9½	9½	9½	8½	6½	6½	6½
Shrewsbury	8½	8½	8½	9½	—	8½	7	5½	5½	5½
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	6½	6½
South Shields	10½	10½	10½	10½	10	8½	9	7½	7½	7½
Stockport	10½	10	10	10½	9	10	8½	6	6½–7	7½
Stockton-on-Tees	9	10	9½	10	10	10	9	7	7	7½
Stoke-on-Trent	9	9½	9	9	—	8½	8½	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	10	10½	10	10	10	9	9	6½	6½	7
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	8½	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	9	8	6½	6½	6½
Warrington	8½	9½	9½	10	8½	9½	8½	5½–6	6	6 6½
West Bromwich	10	10	9½	9½	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9½	7	7	6
Windsor	9	9	9	10	—	9	—	6	6	6½
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6
Worcester	8½	9	9	9	8½	9	7½	6	6	6½
York	9½	9½	9	9½	9½	8½	8	6½	6½	

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv., vi., viii., x.; Public Appointments, xxiv.; Auction Sales, xxvi. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to assure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

MARCH 31.—**Bradford.**—STREET PLANNING.—The Bradford Corporation invite designs for replanning of streets.

* NO DATE. — **Cheshire.** — COTTAGES.—Messrs. Laver Bros. invite designs for cottages on the Bromborough Estate. Nine premiums are offered.

NO DATE.—**Stepney.**—MUNICIPAL BUILDINGS.—The Stepney B.C. invite designs for the proposed municipal buildings. Conditions may be obtained from Mr. G. W. Clarke, Town Clerk, Municipal Offices, 15, Gt. Alie-street, Whitechapel, E.

NO DATE. — **Whitehaven.** — HOSPITAL. — The Galemire Joint Hospital Committee invite competitive designs from architects for a small hospital proposed to be erected in their district. Particulars of Mr. E. B. Croasdell, Clerk, Union Hall, Whitehaven.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MARCH 15.—**Ashton-under-Lyne.**—PAINTING.—Painting, etc., at St. Peter's, Welbeck-street, and St. Mary's Schools. Specifications at the Education Office, Ashton-under-Lyne.

MARCH 15.—**Leith.**—SORTING OFFICE.—Erection of Leith new sorting office for the Commissioners of H.M. Works and Public Buildings. Quantities at H.M. Office of Works, 3, Parliament-square, Edinburgh. Deposit, £1 1s.

MARCH 15.—**Pontypridd.**—WALLS, ETC.—Erection of retaining walls and new latrines, and the formation of new playgrounds and drainage at Graig School for the Pontypridd E.C. Quantities of Mr. W. E. Lowe, Engineer, Municipal-buildings, Pontypridd. Deposit, £2 2s.

MARCH 15. — **Various Places.** — PAINTING. — Tenders invited by the Great Western Railway Company for cleaning and repainting station buildings, bridges, etc., at the following places:—(9) Minehead, Barnstaple, Tiverton, Exeter, etc.; (10) Marston Magna, Somerton, Bridgwater, etc.; (11) West Bay, Abbotsbury, Easton, etc.; (12) Dorchester, Weymouth, etc.; (13) Dawlish, Teignmouth, etc.; (14) Keyham, Yelverton, Princetown, etc.; (15) Bodmin-road, St. Austell, etc.; (16) Truro, Redruth, etc. Quantities of the Engineer at Taunton for contracts Nos. 9 to 12, and at Plymouth (North-road) for contracts Nos. 13 to 16.

MARCH 16. — **Alnwick.** — CONVENIENCES.—Construction of a permanent erection in the Marketplace containing public conveniences, for the Alnwick U.D.C. Specifications at U.D.C. Offices, Green Bat, Alnwick.

MARCH 17. — **Dewsbury.**—WAREHOUSE.—Erection of a warehouse off South-street and School-street, Dewsbury, for Messrs. Henry Cullingworth & Sons. Quantities of Messrs. Kirk, Sons, & Ridgway, architects, Market-place, Dewsbury.

MARCH 17.—**Halifax.**—VERANDAH.—Erection of a verandah to shops in the Market Hall for the Halifax Corporation. Specification of Mr. James Lord, Borough Engineer, Town Hall, Halifax. Deposit, £1.

MARCH 17. — **Huddersfield.**—SHED.—Erection of a storage shed at the Tramway Depôt, Longroyd Bridge, for the Corporation. Quantities of Mr. K. F. Campbell, Borough Engineer, 1, Peel-street.

MARCH 17.—**Lurgan.**—BUSINESS PREMISES.—Rebuilding business premises at 22, Market-street, Lurgan, for Mr. A. G. Malcomson. Specification of Messrs. Hobart & Heron, architects, Scottish Provident-buildings, Belfast. Quantities of Messrs. M'Carthy & Brookes, surveyors, Belfast.

MARCH 17. — **Manchester.** — ALTERATIONS. — Alterations to the Institution of Rose-hill, Northenden, for the Manchester B.G. Quantities of Mr. A. J. Murgatroyd, architect, 23, Strutt-street, Manchester. Deposit, 10s.

MARCH 17. — **Various Places.** — PAINTING. — Tenders invited by the Midland Railway Company for cleaning and painting as follows:—(1) St. Pancras Passenger Station roof; (2) Leicester Passenger Station; (3) stations, etc., Chellaston, Melbourne, Tonge, Worthington, Weston, and Castle Donington; (4) stations, etc., Manton, Luffenham, Ketton, Stamford, Uffington, Helpston, Walton, and Peterborough; (5) stations, etc., Turvey, Olney, Piddington and Horton, and Northampton; (6) stations, etc., Hitchin, Henlow, Shefford, Southill, Cardington, and Bedford; (7) Nottingham Passenger Station. Quantities at the Engineer's Office, Derby Station.

MARCH 17.—**Westminster.**—PAINTING, ETC.—Painting and repairs to the Union Offices, at 15, Henrietta-street, and 29, Maiden-lane, Covent-garden, W.C., for the Westminster Guardians. Specifications of Mr. W. J. Lickley, Clerk, Guardians' Offices, Princes-row, Buckingham Palace-road, S.W.

MARCH 18. — **Darlington.** — ADDITIONS.—Erection of additions to the Electric Power Station, Haughton-road, for the Darlington Corporation. Quantities of Mr. George Winter, Borough Surveyor, Town Hall. Deposit, £2 2s.

MARCH 18. — **Glasgow.** — SCHOOL. — Various trades in connection with the construction of Albert Higher Grade Public School, Springburn, for the School Board of Glasgow. Specifications at the School Board Offices (Master of Works' Department), 129, Bath-street, Glasgow. Deposit, £2 2s.

MARCH 18.—**Prestwich.**—PAINTING.—Painting exterior of main building, Gasworks, etc., and portions of interior annexe buildings for the Committee of Visitors of the County Asylum, Prestwich. Specifications at the County Asylum, Prestwich.

MARCH 20.—**Coventry.**—PAINTING, ETC.—Exterior painting and renovations required at the Public Baths, Priory-street. Specification of Mr J. E. Swindlehurst, City Engineer, Saint Mary's Hall, Coventry. Deposit, £1 1s.

MARCH 20.—**Crumlin.**—SHOPS, ETC.—Erection of two lock-up shops and premises, situated in Pontypool-road, Crumlin, for Mrs. George Jones. Quantities of Mr. Evan D. T. Jenkins, architect, Station-chambers, Crumlin, Mon. Deposit, £1 1s.

MARCH 20. — **Exeter.** — REPAIRS, ETC. — For repairs, etc., to the properties of the B.G. for one year. Schedules of Mr. R. M. Challice, surveyor, 7, Bedford-circus, Exeter. Deposit, 10s. 6d.

MARCH 20. — **Halifax.**—CONVERSION.—Converting the premises known as "Craigie Lea," Ovenden, Halifax, into a children's home for the Halifax Poor Law Guardians. Quantities of Messrs. Clement Williams & Sons, architects, Post Office-buildings, Commercial-street, Halifax.

MARCH 20.—**Market Bosworth.**—FLOODPATH.—Building a stonework floodpath and handrail at Congerstone for the Market Bosworth R.D.C. Specifications of Mr. John Thorpe, Highway Surveyor, Market Bosworth, Nuneaton.

MARCH 20. — **Radcliffe.** — PAINTING.—Outside painting of St. Paul's Wesleyan Church and Schools, Radcliffe. Mr. Wm. Marsh, 43, Starling-road, Radcliffe.

MARCH 22.—**Carlisle.**—EXTENSION.—Extension of the engine-drivers' dormitory at Kingmoor, Carlisle, for the Caledonian Railway Company. Specification of the Company's Engineer, Buchanan-street Station, Glasgow, the District Engineer, Princes-street Station, Edinburgh, and the District Traffic Superintendent, Carlisle. Deposit, £2 2s.

MARCH 22. — **Chelmsford.** — ENGINE-HOUSE.—Erection of an engine-house and incidental works at the Admiral's Park Waterworks for the Corporation. Specification of Mr. Percival T. Harrison, Borough Engineer, Municipal Offices, Chelmsford. Deposit, £2 2s

MARCH 22. — **Dumfries.** — EXTENSION.—Extension of Dumfries Post-office for the Commissioners of H.M. Works and Public Buildings. Quantities at H.M. Office of Works, 3, Parliament-square, Edinburgh. Deposit, £1 1s.

MARCH 22.—**Garnfach.**—ARTS CENTRE.—Erection of a domestic arts centre at Garnfach, Nantyglo, Mon., for the Monmouthshire E.C. Quantities of Mr. John Bain, County Council Offices, Newport. Deposit, £1 1s.

* MARCH 22.—**Pembury.**—ENGINE-HOUSE.—The Tunbridge Wells Corporation invite tenders for erection and completion of a new engine-house.

MARCH 22.—**Stevenage.**—COTTAGES.—Erection of eight cottages for the Stevenage U.D.C. Specification of Mr. Wm. Onslow Times, Clerk, Council Offices, Stevenage. Deposit, £1 1s.

MARCH 23. — **Southall-Norwood.** — HOUSES.—Direct supply of materials and the labour required in the various trades in the erection of fifty-four houses for the U.D.C. Quantities of Mr. R. Brown, Engineer and Surveyor, Town Hall, Southall.

MARCH 24.—**Manchester.**—BATHS.—Erection of baths at Barlow-road, Levenshulme, for the Corporation. Quantities of the City Architect, Town Hall. Deposit, £1 1s.

MARCH 24.—**Manchester.**—HOSPITAL BLOCK.—Erection of a hospital block at Withington for the South Manchester B.G. Quantities of Mr. F. H. Overmann, 49, King-street, Manchester. Deposit, £1 1s.

MARCH 24. — **Sheffield.**—CONVENIENCES.—Erection of public conveniences in various parts of the city. Particulars from Mr. Charles F. Wike, City Engineer, Town Hall, Sheffield. Deposit, £1.

MARCH 27.—**Spalding.**—COTTAGES, ETC.—Erection of three cottages and outbuildings in the parish of Surfleet for the Spalding R.D.C. Quantities of Messrs. Davis & Crowley, architects, 6, Double-street, Spalding, or at 2, York-row, Wisbech.

MARCH 29.—**Bridlington.**—EXTENSION.—Extension of Grammar School. Quantities, etc., of Mr. J. Bilson, 23, Parliament-street, Hull. Deposit, £1.

APRIL 7.—**Anglesea.**—SCHOOL, ETC.—Erection of new Council schools at Llandyfrydog and Ty Mawr, and for additions to Council schools at Pentraeth, Llanfachraith, Llaingoch, and Llechyehed, for the Anglesea E.C. Specifications of Mr. J. Owen, County Architect, Menai Bridge.

NO DATE.—**Bristol.**—CHAPEL.—Erection of a Baptist Chapel at Patchway. Applications to Messrs. La Trobe & Weston, F.R.I.B.A., architects, 1, Unity-street, Bristol.

NO DATE. — **Corbets Tey.** — ALTERATIONS. — Alterations and repairs to the farmhouse, Little Sunnings, Corbets Tey, Essex. Specification of Mr. J. William Stevens, architect, Bridge House, 181, Queen Victoria-street, E.C.

NO DATE.—**Cwmgorse.**—HOUSE.—Erection of a house at Abernant-road, Cwmgorse, Gwauncaegurwen, for the Committee of the Tabernacle Congregational Church, Cwmgorse. Specifications, etc., from the architect, Mr. Gomer Thomas, Tydfil House, Cwmgorse, Glam.

* NO DATE.—**Fulham.**—REPAIRS.—The Churchwardens of St. Clement's Church, Fulham Palace-road, Fulham, invite tenders for repairing of floor, roof, belfry, etc.

NO DATE.—**Halifax.**—HOUSE.—Separate tenders for the bricklayers', joiners', and plumbers' work in erection of house at Howden-road Farm, Holme-on-Spalding Moor. Specifications of Mr. Arthur Firth, Hyde Park-road, Halifax.

* NO DATE.—**Maghull.**—TWO RESIDENCES.—The Board of Control invite tenders for erection of residences for two officials.

NO DATE. — **Plymouth.** — ALTERATIONS, ETC.—(1) Alterations to offices; (2) paving Approach-road; (3) erecting transit shed, for the Victoria Wharves, Ltd. Names to Messrs. Prigg & Lindon, Engineers and Surveyors, South Devon-chambers, Milbay Station, Plymouth.

NO DATE.—**Ripon.**—ALTERATIONS.—Alterations to the Ripon Cottage Hospital. Names to Messrs. Brown & Crosland, architects, 6, Princes-square, Harrogate.

NO DATE.—**Sherborne.**—ALTERATIONS.—Tenders invited by the Governors of Lord Digby's Secondary School for Girls, Sherborne, for alterations and additions to the school premises. Applications to the architect, Mr. E. C. H. Maidman, Brooklyn House, Sherborne.

FURNITURE, MATERIALS, etc.

MARCH 15.—**Colne.**—MATERIALS.—Supply to the Corporation of road, sewer, and paving materials, lime, etc. Forms of tender of the Borough Surveyor, Mr. T. H. Hartley, Town Hall, Colne, Lancs.

MARCH 15.—**Wrexham.**—MATERIALS.—Supply to the Wrexham R.D.C. of roadstone, glazed pipes, tools, implements, etc. Forms of tender of Mr. Geo. Vernon Price, Council Offices, High-street, Wrexham.

MARCH 16.—**Barton-upon-Irwell.**—MATERIALS.—Supply to the Barton-upon-Irwell R.D.C. of setts, kerbs, macadam, flags, limestone chippings, sanitary pipes, etc. Form of tender of Mr. A. H. Mountain, Surveyor, Union Offices, Patricroft.

MARCH 16.—**Bognor.**—MATERIALS.—Supply to the Bognor U.D.C. of road materials, cement, timber, etc. Specifications from the Council's Surveyor, High-street, Bognor.

[Those with an asterisk (*) are advertised in this issue.]

FURNITURE, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MARCH 16.—**Hazel Grove.**—MATERIALS.—Supply to the Hazel Grove and Bramhall U.D.C. of broken stone, setts, kerbs, chippings, ashes, pipes, etc. Forms of tender of Mr. G. Severn Doncaster, Surveyor, Council Offices, Hazel Grove.

MARCH 16.—**Knaresborough.**—ROAD MATERIAL.—Supply to the Knaresborough R.D.C. of road material. Form of tender of the Surveyor, 14, Bower-road, Harrogate.

MARCH 16.—**Mountain Ash.**—MATERIALS.—Supply to the Mountain Ash U.D.C. of glass, paints, oils, stoneware pipes and specials, cast-iron pipes and specials, cement and sand, timber, wrought-iron tubes and fittings, fittings for gas, gas meters, street lamps, castings, etc. Forms of tender of Mr. W. G. Thomas, Surveyor, Town Hall, Mountain Ash.

MARCH 16.—**St. Helens.**—MATERIALS.—Supply to the Corporation of road materials, ironwork, salt-glazed ware pipes, etc., Portland cement and lime, timber, paints. Form of tender of Mr. Arthur W. Bradley, Borough Engineer, Town Hall.

MARCH 16.—**Tottenham.**—MATERIALS.—Supply to U.D.C. of lime and cement, road materials, etc. Forms of tender of Mr. Reginald C. Graves, Clerk, Town Hall, Tottenham.

MARCH 16.—**Wigan.**—MATERIALS.—Supply of materials to the Wigan Corporation Electric Light Department. Forms of tender of Mr. J. Slevin, Electrical Engineer, Bradford-place, Wigan.

MARCH 17.—**Bournemouth.**—ROAD MATERIALS.—Supply of materials required by Roads Committee. Forms of tender of Mr. F. W. Lacey, Borough Surveyor, Town Hall.

MARCH 17.—**Eastbourne.**—ROAD MATERIALS.—Supply to the R.D.C. of Eastbourne of road materials. Forms of tender from Mr. C. M. Carter, District Surveyor, "Mount Sorrel," Hampden Park, Eastbourne.

MARCH 17.—**Ely.**—ROAD MATERIALS.—Supply to the R.D.C. of 3,150 tons of granite and 1,050 tons of gravel. Forms of tender of Mr. F. W. Firby, District Surveyor, Sutton, Isle of Ely.

MARCH 17.—**Ipswich.**—MATERIALS.—Supply to the Sanitary Authority of various materials. Forms of tender of Mr. John R. Mead, Borough Surveyor, Town Hall, Ipswich.

MARCH 17.—**Nelson.**—MATERIALS.—Supply to the Corporation of road and sewer materials, cement, etc. Forms of tender of Mr. W. Shackleton, Borough Engineer, Nelson.

MARCH 17.—**Oldham.**—MATERIALS.—Supply to the Corporation of road, paving, sewer, and other materials. Form of tender at the Borough Surveyor's Office, Town Hall, Oldham.

MARCH 17.—**Rothwell.**—MATERIALS.—Supply of road, sewer, and other materials to the Rothwell U.D.C. Forms of tender at the Council Offices, Rothwell, near Leeds.

MARCH 17.—**Wrexham.**—MATERIALS.—Supply of materials to the Borough Surveyor's and the Borough Electrical Engineer's Departments. Forms of tender of the Borough Surveyor and the Borough Electrical Engineer respectively.

MARCH 18.—**Felixstowe.**—MATERIALS.—Supply to the Felixstowe U.D.C. of road and other materials. Forms of tender of Mr. H. Clegg, Engineer, Town Hall, Felixstowe.

MARCH 18.—**Lanchester.**—ROAD MATERIALS.—Supply to the Lanchester R.D.C. of 13,200 tons of limestone, 2,800 tons of whinstone, 1,600 tons of slag, and 1,250 tons of tarred slag. Forms of tender of Mr. Wm. Cumming, Highway Surveyor, Lanchester, Durham.

MARCH 19.—**Bexhill.**—MATERIALS.—Supply to the Corporation of bricks, cement, sand, lime, stoneware, pipes, bends, junctions, etc. Forms of tender of Mr. George Ball, Borough Surveyor, Town Hall, Bexhill.

MARCH 19.—**Horbury.**—MATERIALS.—Supply to the Horbury U.D.C. of tarmac, granite, whinstone, dross, flags, kerbs, setts, and general stores. Forms of tender of Mr. W. Sugars, Surveyor, Town Hall, Horbury.

MARCH 20.—**Bacup.**—MATERIALS.—Supply of road, sewer, paving, and other materials to the Corporation. Forms of tender of the Borough Surveyor.

MARCH 20.—**Bedwellty.**—MATERIALS.—Supply to the Bedwellty U.D.C. of fittings for gas, water tubes and fittings, paints, oils, cast-iron pipes and specials, stoneware pipes and specials, road materials, etc. Forms of tender of Mr. Dan H. Price, Surveyor's Office, Aberbargoed.

MARCH 20.—**Brixton.**—MATERIALS.—Supply to the Buxton U.D.C. of road and sewer materials, Portland cement, castings (street ironwork), for the year ending March 31, 1916. Forms of tender, etc., of Mr. F. Langley, Engineer, Town Hall, Buxton.

MARCH 20.—**Kiveton Park.**—ROAD MATERIAL.—Supply to the Kiveton Park R.D.C. of broken slag, granite, and tar macadam. Forms of tender from Mr. F. Hewitt, Surveyor, Council Offices, Kiveton Park Station, near Sheffield.

MARCH 20.—**Oswestry.**—ROAD MATERIAL.—Supply to the Oswestry R.D.C. of broken granite, broken and unbroken limestone. Mr. Charles H. Bull, Clerk, Oswestry.

MARCH 20.—**Rishton.**—MATERIALS.—Supply to the U.D.C. of road and other materials. Forms of tender from the Surveyor, Council Offices, Brook-street, Rishton.

MARCH 20.—**Southborough.**—Supply to the U.D.C. of about 800 tons of basalt, granite, etc. Forms of tender of Mr. Philip Hanmer, Clerk, Council Offices, Southborough.

MARCH 22.—**Coventry.**—MATERIALS.—Supply to the Corporation of broken road stone, granite kerbs, granite setts, stoneware pipes, castings, workmen's tools. Form of tender of Mr. J. E. Swindlehurst, City Engineer, Saint Mary's Hall.

MARCH 22.—**Eastbourne.**—MATERIALS.—Supply to the Corporation of Portland cement, cast-iron goods, wrought-iron goods, tools, etc., miscellaneous ironmongery, oils and colours, bricks, glazed stoneware pipes, etc. Forms of tender at the Borough Surveyor's Office, Town Hall, Eastbourne.

MARCH 22.—**Whitefield.**—MATERIALS.—Supply to the Whitefield U.D.C. of granite macadam, setts, chippings, kerbs, flags, oils, cement, pipes, ironwork, etc. Forms of tender of Mr. G. M. Denton, Surveyor, Council Offices, Whitefield.

ENGINEERING, IRON, AND STEEL.

MARCH 16.—**Camberwell.**—BOILER.—Providing and fixing new boiler or water-heater at the Dulwich Baths, Goose-green, S.E. Specification from Mr. William Oxtoby, Borough Engineer, Town Hall, Camberwell, S.E.

MARCH 16.—**Glasgow.**—PUMPS, ETC.—Supply to the Corporation Fire Department of (1) two four-cylinder petrol turbine motor pumps and (2) two chassis only, with four-cylinder engine. Specifications of Mr. William Waddell, Chief Officer, Fire Brigade, 33, Ingram-street, Glasgow.

MARCH 16.—**India.**—RAILWAY MATERIAL.—Supply to the Bombay, Baroda, and Central India Railway of (1) C.I. pot sleepers; (2) steel rails and fishplates; (3) rectangular bearing plates; (4) dog spikes and cup-headed spikes; (5) fencing materials. Specification of Mr. C. Crommelin, Secretary 110, Bishopsgate, London, E.C. Charge, £1.

MARCH 16.—**Lambeth.**—KITCHEN APPARATUS.—Supply to the Lambeth B.G. of two 80-gallons cooking pans, one wall range (coal), two gas roasting ovens, single oven gas range. Forms of tender of Mr. James L. Goldspink, Clerk, Guardians' Offices, Brook-street, Kennington-road, S.E. Deposit, £2.

MARCH 16.—**Lambeth.**—WATER SOFTENING PLANT.—Provision and installation of a water softening plant at school, Elder-road, West Norwood, S.E., for the Lambeth B.G. Forms of tender of Mr. James L. Goldspink, Clerk, Guardians' Offices, Brook-street, Kennington-road, S.E. Deposit, £2.

MARCH 16.—**Warrington.**—ELECTRICITY MACHINERY.—Supply to the Electricity Department of (1) motors; (2) high and low tension cables; (3) E.H.T. feeder panel; (4) transformers. Specifications of Mr. F. V. L. Mathias, M.I.E.E., Borough Electrical and Tramways Engineer, Howley, Warrington. Deposit, £1 1s. each specification.

MARCH 16.—**Weston-super-Mare.**—BRIDGE.—Reconstruction of Uphill Drove Bridge, Weston-super-Mare, for the Great Western Railway Company. Quantities of the Engineer at Paddington Station.

MARCH 17.—**India.**—METALS, ETC.—Supply to the South Indian Railway Company of metals, wrought-iron—bar, steel. Specifications of Mr. V. E. De Broe, 91, York-street, Westminster, S.W. Charge, 10s. for first two and 20s. for third.

MARCH 17.—**Rochdale.**—MATERIALS.—Supply to the Gas Department of wrought-iron tubes and fittings, cast-iron main pipes and specials, bar and sheet iron, steel charging shovels, galvanised iron buckets, etc. Forms of tender of Mr. T. Banbury Ball, the Manager, at the Gasworks, Dean-street.

MARCH 18.—**Cardiff.**—SHED.—Supply and erection of a shed at the W.D.S. Pumping Station, Penarth-road, Cardiff, comprising a steel roof, 72 ft. by 45 ft., covered with galvanised corrugated sheeting. Specification of the City Engineer, City Hall, Cardiff.

MARCH 19.—**Doncaster.**—RESERVOIR.—Extension of reservoir for the Doncaster R.D.C. in reinforced concrete. Specifications, etc., of Mr. H. R. Crabtree, Surveyor, Union Offices, High-street, Doncaster.

MARCH 19.—**Swinton.**—MATERIALS.—Supply to the Swinton and Pendlebury U.D.C. Electricity Department of cables, joint boxes, bitumen, and joint box compound. Specifications of Mr. H. C. Rusbridge, Electrical Engineer, Council Offices, Swinton, Lancs.

MARCH 20.—**Southampton.**—FIRE-ENGINE.—Supply to the Corporation of a motor fire-engine of 450-500 gallons per minute capacity, complete with 50-ft. fire-escape and first aid equipment. Particulars of the Superintendent, Central Fire Station, Southampton.

MARCH 22.—**South Africa.**—RAILWAY MATERIAL.—Supply to the South African Railway Administration of 294,000 transverse steel sleepers, together with proportionate quantities of steel-clip washers, bolts and nuts, and spring washers. Specifications at the office of the High Commissioner for the Union of South Africa, 32, Victoria-street, E.C.

MARCH 23.—**Dundalk.**—MATERIALS.—Supply of stores to the Electricity Department of the Dundalk U.D.C. Forms of tender of Mr. P. A. Spalding, Electrical Engineer, Electricity Works, Dundalk.

MARCH 25.—**London.**—VARIOUS.—For scaling and cleaning boilers and oiling and cleaning lifts for the Guardians of Saint George-in-the-East. Particulars of Mr. R. M. Lochner, Clerk, Guardians' Offices, Raine-street, Old Gravel-lane, .

MARCH 25.—**Manchester.**—GASHOLDER REPAIRS.—Part reshceting and repairing of the No. 1 gasholder at the Gaythorn Gasworks for the Manchester Corporation Gas Department. Specification of Mr. Frederick A. Price, Superintendent, Gas Department, Town Hall, Manchester. Deposit, £1 1s.

MARCH 31.—**Dublin.**—KITCHEN EQUIPMENT.—Equipment of cookery rooms at Marlborough-street Training College, Dublin. Specifications of Mr. J. Franklin Fuller, architect, 179, Great Brunswick-street, Dublin.

MARCH 31.—**Egypt.**—PUMPS, ETC.—Supply to the Inspector-General of Prisons, Cairo, of (1) set of 5-in. diameter by 9-in. stroke strong triple barrel lift and force pump; (2) a vertical 5-in. diameter by 6-in. stroke double barrel lift and force pump; and (3) two vertical 10 n.h.p. boilers, with accessories. Conditions at office of Sir A. L. Webb, Queen Anne's-chambers, Westminster, S.W.

APRIL 19.—**Spain.**—TRAMWAY.—The "Gaceta de Madrid" announces that tenders are invited for the construction and working for sixty years of a tramway for the town of Marmolejo to the neighbouring medicinal springs. The coaches will be drawn by animal traction. Tenders to the "Dirección General de Obras Publicas," Madrid.

NO DATE.—**Chesterfield.**—TANKS.—Provision and erection of three cast-iron tanks, one of 100,000 gallons capacity and the other two of 50,000 gallons capacity each, for the Chesterfield R.D.C. Particulars of the Council's Waterworks Engineer, Mr. Gilbert Frith, Rural District Council Offices, Chesterfield.

NO DATE.—**Russia.**—PUMPS, ETC.—The Petrograd Waterworks and Canalisation Company, in course of formation, invite as shareholders manufacturers and others to supply pumps, pipes, fittings, and all accessories. Address Company, c/o Messrs. L. & E. Metal & Co., Petrograd, Morskaja 11, "Canalisation N. 74,200."

NO DATE.—**Salford.**—CRANE.—Supply to the Lighting and Cleansing Committee of a two-ton portable handcrane. Specifications to the Chairman, Cleansing Department, Wilburn-street, Salford.

ROAD, SANITARY, AND WATER WORKS.

MARCH 15.—**Bradfield.**—ROADS.—Repairs of roads in the district of the R.D.C. Specification of Mr. B. A. Collins, Clerk, 172, Frier-street, Reading.

MARCH 15.—**Tipton.**—SEWER.—Construction of sewer at Tibbington for the Tipton U.D.C. Quantities of Mr. W. H. Jukes, Engineer, Public Offices, Owen-street, Tipton.

MARCH 15.—**Wandsworth.**—ROADS.—Works of repair upon part of Wimbledon Park-road, Southfield, for the Wandsworth B.C. Specification of the Borough Engineer, Mr. P. Dodd, 56, East-hill, Wandsworth, S.W. Deposit, £5 5s.

MARCH 16.—**Lanchester.**—SEWERS.—Laying 569 yds. of earthenware and cast-iron sewers, with manholes, etc., for the R.D.C. Quantities of Mr. J. R. Lupton, Surveyor, Lanchester.

MARCH 17.—**Wandsworth.**—DRAINAGE.—For surface water drainage works at Wandsworth Cemetery, Magdalen-road, Wandsworth, S.W., for the B.C. Specification of the Borough Engineer, 215, Balham High-road, S.W.

MARCH 19.—**Reigate.**—STREET WORKS.—Private street works to be executed in Breech-lane, Walton-on-the-Hill, for the Reigate R.D.C. Specification at the office of the Surveyor, Mr. Arthur J. Head, 48, High-street, Reigate.

MARCH 20.—**Eccles.**—SEWERAGE WORKS.—Construction of about 500 lineal yds. of 7-ft. 6-in. by 5-ft. egg-shaped sewer, 72 lineal yds. of 5-ft. 9-in. by 3-ft. 10-in. egg-shaped sewer, and 70 lineal yds. of 9-in. stoneware pipe sewer at Peel Green, etc., for the Corporation. Quantities, etc., of the Borough Engineer, Mr. Thomas S. Picton, Town Hall, Eccles. Deposit, £3.

MARCH 23.—**Hamilton.**—WATER SUPPLY.—Laying about ten and a half miles of 30-in. and 27-in. diameter cast-iron pipes, the construction of about 700 yds. of a concrete and brickwork aqueduct, and other relative works, along the Abington and Lesmahagow-road, for the Lanarkshire (Middle Ward District) Water Committee. Quantities of Mr. James M'Millan, Water Engineer, District Offices, Hamilton. Deposit, £1.

MARCH 24.—**Finchley.**—SEWAGE FILTERS.—Construction of four clinker sewage filters, etc., at the Sewage Farm, Summers-lane, Finchley, for the U.D.C. Specification of the Council's Engineer, Mr C. J. Jenkin, Council Offices, Finchley, N. Deposit, £2 2s.

MARCH 24.—**Portishead.**—STREET WORKS.—Making up Gardner-road, Portishead, for the Portishead U.D.C. Specification at the Council Offices, Portishead.

MARCH 24.—**Stowmarket.**—STREET WORKS.—For surface water draining, kerbing, channelling, and road-making at Victoria-road, Stowupland, near Stowmarket, for the East Stow R.D.C. Specification of Mr. Henry E. Wilkes, Clerk, Market-place, Stowmarket, Suffolk.

MARCH 24.—**Wanstead.**—ROADS.—Tar dressing during the spring of this year the carriage-way of gravel roads (area 50,000 to 70,000 yds. super) for the Wanstead U.D.C. Specification at the Council Offices, Wanstead, N.E., Surveyor's Department.

[Those with an asterisk (*) are advertised in this issue.]

ROADS, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MARCH 25.—**Belper.**—WATER MAIN.—Providing and laying about three-quarters of a mile of 9-in. cast-iron pumping main at Belper for the U.D.C. Specification of the Consulting Engineers, Messrs. G. & F. W. Hodson, M.Inst.C.E., at Bank-chambers, Loughborough. Deposit, £5 5s.

MARCH 25.—**Riccall.**—WATER SUPPLY.—Supplying, laying, and jointing two 6-in. steel mains, also dredging for same in bed of river Ouse, and for laying cast-iron water mains, etc., for the Riccall R.D.C. Specifications of Mr. J. Townend, Clerk to the Council, 1, Abbey-place, Selby.

* MARCH 25. — **Southampton.** — HOT-WATER SYSTEM.—The Southampton C.C. invite tenders for installation of low-pressure hot-water apparatus (Gould system) at a school.

MARCH 26.—**Carmarthen.**—WATER WORKS.—Providing and laying 668 yds. of 4-in. and 214 yds. of 3-in. water mains, etc., for the Carmarthen R.D.C. Specifications of Mr. W. E. Jones, Surveyor, Rock Hill, Llanarthrey.

MARCH 27.—**Wilmslow.**—PAVING.—Concreting and paving of Station-road and Swan-street with granite setts for the U.D.C. Quantities of Mr. A. S. Cartwright, Surveyor, Council Offices, Wilmslow. Deposit, £1 1s.

MARCH 29.—**Cranbrook.**—SEWERAGE WORKS.—Construction of sewage disposal works at North-road, Goudhurst for the Cranbrook R.D.C. Forms of tender from Mr. J. H. Bailey, Sanitary Surveyor, Pendennis, Cranbrook.

MARCH 30.—**Gateshead.**—ROADS.—For cement path work in position on various roads and streets as may be required for one year. Quantities of Mr. N. P. Pattinson, Borough Engineer, Town Hall, Gateshead.

NO DATE.—**Farsley.**—STREET WORKS.—Street construction works at Viaduct-street, Stanningley, for the Farsley U.D.C. Applications to Mr. R. H. Noble, Surveyor, Council Offices, Farsley.

Public Appointment.

* MARCH 23. — ENGINEERING ASSISTANT. — The County Borough of Dewsbury invite applications for the above temporary post. Salary not stated.

Auction Sales.

* MARCH 18.—**Holloway.**—Mr. H. W. Smith will sell by auction, on the premises, the stock and plant of a builders' merchant.

* MARCH 22. — **Woodgrange Park.** — Messrs. Robins & Hine will sell by auction a quantity of old timber.

* APRIL 13. — **Gloucester.** — Messrs. Burton, Knowles, & Co. will sell by auction the stock, timber, plant, machinery, buildings, etc., of a timber merchant.

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom at the prepaid rate of 19s. per annum, with delivery by *Friday Morning's Post* in London and its suburbs.

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Remittances (payable to THE BUILDER LTD.) should be addressed to 4, Catherine-street, Aldwych, London W.C.

[Those with an asterisk (*) are advertised in this issue.]

PATENTS.

APPLICATIONS PUBLISHED.*

22,481 of 1913.—Edward Charles Robert Marks (Aktieselskabet de Forenede Norske Laase & Beslagfabriker): Lock for doors and the like.

479 of 1914.—Frank Pascall: Combined domestic fireplaces and cooking-stoves.

902 of 1914.—Jean Abt: Fluxing composition for use in brazing cast-iron, rod-iron, or cast-steel to cast-iron.

2,871 of 1914.—Henry Lewis Doulton and Charles Edward Morris: Earthenware troughs for electric cables and other purposes.

3,528 of 1914.—Frederick Hagger Headley: Adjustable ties, struts, stays, or the like.

3,761 of 1914.—Frank Mills Andrews: Apparatus for drying and heating sand, stone, grit, or other materials.

3,762 of 1914.—Frank Mills Andrews: Means for drying and heating sand, stone, grit, or other materials.

4,096 of 1914.—Henry Julius Trautmann and James Lloyd Copping: Duct system of mechanical ventilation.

5,081 of 1914.—John Beardsell Broadhead and Dennis Barker: Lime or like mixing machines.

5,319 of 1914.—George Niven Wood: Fences and the like.

7,893 of 1914.—Charles Edmund Clews: Self-locking fastener for sliding sash-windows.

8,024 of 1914.—Percival William Flavel: Fire-places.

8,480 of 1914.—Mary Mouat: Closet-seat guards.

10,353 of 1914.—Henry Patrick Kane: Concrete reinforcing bars.

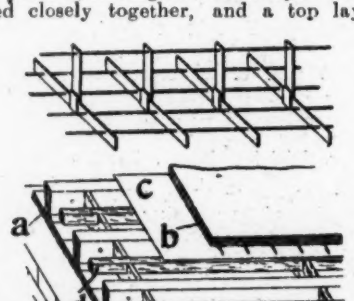
11,916 of 1914.—George Douglas Hodges and Daniel Smith: Means for indicating movement of the walls, roof, or floor of mines, tunnels, and the like.

19,819 of 1914.—George Henry Stanbridge: Bolts for doors.

SELECTED PATENTS.

22,142 of 1913.—Hinrich Schmaljohann: Floors and ceilings.

This relates to a hollow floor and ceiling formed of inverted T-shaped reinforced concrete joists *a*, having dovetail-shaped webs and placed closely together, and a top layer of

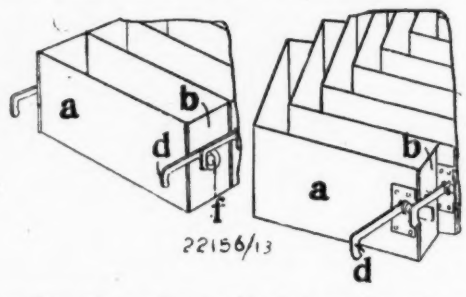


concrete *b*, which is cast on boards *c* laid over the joists, and supported between them by wooden laths *d* and transverse boards *e*. A layer of sound-deadening material may be placed over the joist flanges, and strips of felt may be inserted at the bearing-faces of the boards *c*.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

22,156 of 1913.—Anton Schnell: Model building-blocks.

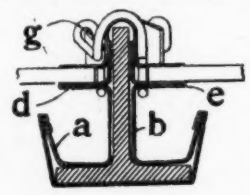
This relates to moulds for building-blocks formed of a series of open sections, having vertical walls *a*, *b* connected together by hooks *d* on one section, engaging pins *f* on the next,



so that the moulds can be used continuously, a section being detached from the forward end and connected to the rear end of the series to form the next mould. The walls *b* are hinged to the walls *a* to facilitate separation from the moulded blocks.

22,483 of 1913.—Phillippe François Armand Mauroy: Glazing roofs.

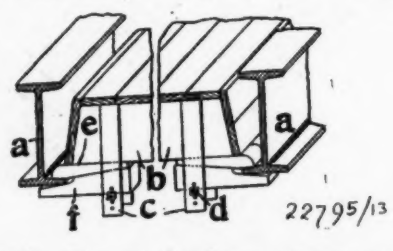
This relates to a method of glazing roofs, wherein the bedding surface strips *a*, *b* for the



glass are bent to form single water channels, and the hooked clips *g* for securing the capping are passed through elongated holes in the parts *d*, *e* of the strips.

22,795 of 1913.—Charles Tomkinson and John Thomas Williams: Centering for floors.

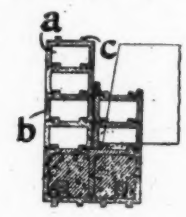
This relates to floor centering, consisting of beams *b* shorter than the distance between the flanges of adjacent floor-supporting girders *a* and supported by wedges *e*, *f*, which engage



opposite sides of the lower flanges of the girders, and are inserted between the beams and abutments provided on stirrups *c* suspended on the beams. The abutments consist of bolts *d* inserted in holes in the stirrups, or of horizontal parts continuous with the stirrups.

23,011 of 1913.—Arthur Hardoncourt: Walls.

This relates to hollow walls constructed of channel blocks *a* formed with supporting-feet *b* and continuous ribs *c* on the upper faces, forming recesses to receive mortar and the feet of the blocks above. The outer feet and the ribs may be undercut to facilitate the binding of the mortar and blocks. At the ground line the base blocks are inverted and the joists are supported on the second row of blocks, fillings



of concrete being inserted between the joists and the blocks, and in the spaces between the blocks, together with reinforcing rods.

PRICES CURRENT OF MATERIALS.

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.]

Since our last issue increases have been made in lead, glass, and oil prices.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect price—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

	£ s. d.
Per 1000 Alongside, in River.	
Best Stocks	1 18 0
Picked Stocks for Facings	2 12 0

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s. d.
Flettons	1 14 0	Best Blue Pressed Staffordshire	3 15 0
Best Fareham Red	3 12 0	Do. Bullnose	4 0 0
Best Red Pressed Ruabon Facing	5 0 0	Best Stourbridge Fire Bricks	4 0 0
GLAZED BRICKS—			
Best White, Ivory, and Salt Glazed Stretchers	13 0 0	Double Headers One Side and two Ends	19 10 0
Headers	12 10 0	Two Sides and one End	20 10 0
Quoins, Bullnose and 4½ in. Flats	16 10 0	Splays and Squints	18 0 0
D'ble Str'tch'rs	18 10 0		

Second Quality £1 10s. per 1000 less than best.

	s. d.
Thames and Pit Sand	7 6 per yard, delivered.
Thames Ballast	6 0 „ „ „
Best Portland Cement	38 0 per ton, „
Best Ground Blue Lias Lime	21 0 „ „

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime	14s. 0d. per yard delivered.
Stourbridge Fireclay in sacks	27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

	s. d.
BATH STONE — delivered on road waggons, Paddington Depôt	1 7½
Do. do. delivered on road waggons, Nine Elms Depôt	1 9½
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½
White Basebed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 6½

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks	1 10	Closeburn Red Freestone	2 0
Beer in blocks	1 6	Red Mansfield Freestone	2 4
Greenshill in blocks	1 10	Talacre & Gwespyr Stone	2 4
Darley Dale in blocks	2 4		
Red Corsehill in blocks	2 3		

STONE (*Continued*).

YORK STONE—*Robin Hood Quality.*

	s.	d.
Per Ft. Cube, Delivered at Railway Depôt.		
Scappled random blocks	2	10
Per Ft. Super., Delivered at Railway Depôt.		
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2	8
6 in. rubbed two sides ditto, ditto	2	6
3 in. sawn two sides slabs (random sizes)	0	11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0	7
1½ in. to 2 in. ditto, ditto	0	6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.		
Scappled random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
6 in. sawn two sides landing to sizes (under 40 ft. super.)	2	8
6 in. rubbed two sides ditto	3	0
8 in. sawn two sides slabs (random sizes)	1	2
2 in. self-faced random flags	0	5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£	s.	d.	In. In.	£	s.	d.
20 x 10 best blue Bangor	13	5	6	20 x 12 ditto	14	5	0
20 x 12 ditto	14	7	6	16 x 8 ditto	7	0	0
20 x 10 1st q'lity ditto	13	0	0	22 x 10 best blue Portmadoc	12	12	6
				16 x 8 ditto	6	10	6

TILES.

At Railway Depôt.

	s.	d.		s.	d.
Best plain red roofing (per 1000)	42	0	Best "Hartshill" brand, plain sand-faced (per 1000)	45	0
Hip and Valley (per doz.)	3	7	Do. pressed (per 1000)	42	6
Best Broseley (per 1000)	50	0	Do. Ornamental (per 1000)	47	6
Do. Ornamental (per 1000)	52	6	Hip (per doz.)	4	0
Hip and Valley (per doz.)	4	0	Valley (per doz)	3	6
Best Ruabon red, brown, or brindle (Edw'ds) (pr1000)	57	6	Staffords. (Hanley) Reds or Brindled (per 1000)	42	6
Do. Ornamental (per 1000)	60	0	Hand-made sand-faced (per 1000)	45	0
Hip (per doz.)	4	0	Hip (per doz.)	4	0
Valley (per doz.)	3	0	Valley (per doz.)	3	6

WOOD.

BUILDING WOOD.	At per standard.					
	£	s.	d.		£	s.	d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	19	0	0	..	20	12	6
Deals: best 3 in. by 9 in.	19	0	0	..	20	10	0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	17	15	0	..	19	0	0
Battens: best 2½ in. by 6 in. and 3 in. by 6 in.	0	10	0		less than 7 in. and 8 in.		
Deals: seconds	1	0	0		less than best		
Battens: seconds	0	10	0		"		
2 in. by 4 in. and 2 in. by 6 in.	16	0	0	..	17	10	0
2 in. by 4½ in. and 2 in. by 5 in.	15	0	0	..	16	10	0
Foreign Sawn Boards—							
1 in. and 1¼ in. by 7 in.	0	10	0		more than battens.		
¼ in.	1	0	0		"		
Fir timber: best middling	At per load of 50 ft.						
Memel (average specification)	6	15	0	..	7	15	0
Seconds	6	0	0	..	6	10	0
Small timber (8 in. to 10 in.)	5	5	0	..	5	10	0
Small timber (6 in. to 8 in.)	4	10	0	..	5	0	6
Swedish balks	4	0	0	..	4	10	0
Pitch-pine timber (30 ft. average)	8	5	0	..	9	0	0

JOINERS' WOOD.	At per standard.					
	£	s.	d.		£	s.	d.
White Sea: first yellow deals, 3 in. by 11 in.	33	15	0	..	35	0	0
3 in. by 9 in.	31	15	0	..	33	0	0
Battens, 2½ in. and 3 in. by 7 in.	23	7	6	..	24	7	6
Second yellow deals, 3 in. by 11 in.	27	5	0	..	28	5	0
Do. 3 in. by 9 in.	25	5	0	..	26	5	0
Battens, 2½ in. and 3 in. by 7 in.	19	0	0	..	20	0	0
Third yellow deals, 3 in. by 11 in. and 9 in.	20	2	6	..	21	2	6
Battens, 2½ in. and 3 in. by 7 in.	17	10	0	..	18	0	0
Petersburg: first yellow deals, 3 in. by 11 in.	29	10	0	..	31	0	0
Do. 3 in. by 9 in.	25	5	0	..	26	5	0
Battens	19	5	0	..	20	5	0
Second yellow deals, 3 in. by 11 in.	21	10	0	..	23	0	0
Do. 3 in. by 9 in.	20	5	0	..	21	10	0
Battens	17	10	0	..	18	10	0
Third yellow deals, 3 in. by 11 in.	17	15	0	..	18	15	0
Do. 3 in. by 9 in.	17	5	0	..	18	5	0
Battens	17	0	0	..	17	10	0
White Sea and Petersburg—First white deals, 3 in. by 11 in.	22	10	0	..	24	0	0
First white deals, 3 in. by 9 in.	21	0	0	..	22	10	0
Battens	18	0	0	..	19	0	0
Second white deals, 3 in. by 11 in.	20	0	0	..	21	0	0
Second white deals, 3 in. by 9 in.	19	0	0	..	20	0	0
Battens	17	10	0	..	18	10	0
Pitch-pine deals	34	0	0	..	35	0	0
Under 2 in. thick extra	0	10	0	..	1	0	0
Columbian or Oregon Pine, best quality	28	0	0	..	29	0	0
Yellow Pine—First, regular sizes	57	0	0		upwards.		
Oddments	39	0	0		"		
Seconds, regular sizes	43	10	0		"		
Oddments	37	0	0		"		
Kauri Pine—Planks per ft. cube	0	6	9	..	0	7	6

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—	£	s.	d.		£	s.	d.
Oak Logs—							
Large, per ft. cube	0	5	0	..	0	6	0
Small " "	0	4	0	..	0	5	0
Wainscot Oak Logs, per ft. cub	0	10	6	..	0	12	6
Dry Wainscot Oak, per ft. super, as inch	0	0	11	..	0	1	3
¼ in. do. do.	0	0	10	..	0	1	0
Dry Mahogany—Honduras, Tabasco, per ft. super, as inch	0	0	11	..	0	1	4
Selected, Figury, per ft. super, as inch	0	1	6	..	0	2	6
Cuba Mahogany	0	1	6	..	0	2	6
Dry Walnut, American, per ft. super, as inch	0	0	11	..	upwards. 0	1	3
French, "Italian," Walnut	0	0	11	..	0	1	6
Teak, per load (Rangoon or Moulmein)	28	0	0	..	34	0	0
Do., do. (Java)	24	0	0	..	27	0	0
American Whitewood planks, per ft. cube	0	6	6	..	0	7	6
Prepared flooring, etc.—					Per square.		
1 in. by 7 in. yellow, planed and shot	0	18	0	..	1	0	0
1 in. by 7 in. yellow, planed and matched	0	18	0	..	1	0	0
1¼ in. by 7 in. yellow, planed and matched	1	2	0	..	1	5	0
1 in. by 7 in. white, planed and shot	0	17	6	..	1	0	0
1 in. by 7 in. white, planed and matched	0	18	0	..	1	0	0
1¼ in. by 7 in. white, planed and matched	1	2	0	..	1	5	0
¾ in. by 7 in. yellow, matched and beaded or V-jointed boards	0	14	6	..	0	16	6
1 in. by 7 in. " "	0	18	6	..	1	1	0
¾ in. by 7 in. white " "	0	14	6	..	0	16	6
1 in. by 7 in. " "	0	18	6	..	1	1	0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton.						
	£	s.	d.		£	s.	d.
Rolled Steel Joists, ordinary sections	9	10	0	..	10	10	0
Compound Girders, ordinary sections	12	0	0	..	13	0	0
Steel Compound Stanchions	13	0	0	..	15	0	0
Angles, Tees, and Channels, ordinary sections	12	0	0	..	13	0	0
Flitch Plates	12	0	0	..	13	0	0
Cast Iron Columns & Stanchions, including ordinary patterns	9	0	0	..	10	0	0

METALS.

	Per ton, in London.						
IRON—	£	s.	d.		£	s.	d.
Common Bars	9	10	0	..	10	0	0
Staffordshire Crown Bars, good merchant quality	9	15	0	..	10	5	0
Staffordshire "Marked Bars"	11	10	0	..	—		
Mild Steel Bars	9	15	0	..	10	5	0
Hoop Iron, basis price	10	10	0	..	—		
" Galvanised	18	10	0	..	—		
(And upwards, according to size and gauge.)							
Sheet Iron Black—							
Ordinary sizes to 20 g.	11	0	0	..	—		
" " 24 g.	12	0	0	..	—		
" " 26 g.	13	10	0	..	—		
Sheet Iron, Galvanised, flat, ordinary quality—							
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	16	0	0	..	—		
Ordinary sizes to 22 g. and 24 g.	16	10	0	..	—		
Ordinary sizes to 26 g.	17	10	0	..	—		
Sheet Iron, Galvanised, flat, best quality—							
Ordinary sizes to 20 g.	18	10	0	..	—		
" " 22 g. and 24 g.	19	0	0	..	—		
Ordinary sizes to 26 g.	20	0	0	..	—		
Galvanised Corrugated Sheets—							
Ordinary sizes, 6 ft. to 8 ft. 20 g.	15	0	0	..	—		
Ordinary sizes, 22 g. and 24 g.	16	0	0	..	—		
Ordinary sizes, 26 g.	17	0	0	..	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	13	0	0	..	—		
Best Soft Steel Sheets, 22 g. & 24 g.	14	0	0	..	—		
Best Soft Steel Sheets, 26 g.	16	0	0	..	—		
Cut Nails, 3 in. to 6 in.	13	0	0	..	13	10	0
(Under 3 in., usual trade extras.)							

LEAD, &c.

	Delivered in London.						
	£	s.	d.		£	s.	d.
LEAD—Sheet, English, 4 lb. and up	25	2	6	..	—		
Pipe in coils	25	12	6	..	—		
Soil pipe	28	12	6	..	—		
Compo pipe	28	12	6	..	—		
NOTE—Delivery in country in not less than 5 cwt. lots. 1s. per cwt. extra.							
ZINC—	In casks of 10 cwt.						
Sheet—	65	0	0	..	—		
COPPER—							
Strong Sheet per lb.	0	1	5	..	—		
Thin " "	0	1	7	..	—		
Copper nails "	0	1	5	..	—		
Copper wire "	0	1	5	..	—		
BRASS—							
Strong Sheet "	0	1	4	..	—		
Thin "	0	1	5	..	—		
TIN—English Ingots "	0	1	8	..	—		
SOLDER—Plumbers' "	0	0	10	..	—		
Tinmen's "	0	1	1	..	—		
Blowpipe "	0	1	4	..	—		

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

15 oz. thirds	6½d.	26 oz. fourths	6½d.
" fourths	5½d.	32 oz. thirds	8½d.
21 oz. thirds	6½d.	" fourths	7½d.
" fourths	6½d.	Fluted Sheet, 15 oz.	5½d.
26 oz. thirds	7½d.	" 21 oz.	6½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

⅛ Rolled plate	3½d.
3/16 Rough rolled and rough cast plate	3½d.
¼ Rough rolled and rough cast plate	4½d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	5½d.
Ditto, tinted	6½d.

* Not less than two crates.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	2	8
" " " in barrels	"	0	2	9
" " " in drums	"	0	2	11
Boiled " " in barrels	"	0	2	11
" " " in drums	"	0	3	1
Turpentine in barrels	"	0	3	4
" in drums	"	0	3	7
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	31	0	0
Red Lead, Dry	per ton	29	10	0
Best Linseed Oil Putty	per cwt.	0	10	0
Stockholm Tar	per barrel	1	12	0

VARNISHES, &c.

	Per gallon. £	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flating Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	6
French and Brush Polish	0	10	0

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.]

TO CORRESPONDENTS.

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TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 2 *p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

EASTNEY.—For water supply works, for the Eastney Rural District Council:—

T. V. Bond*	£250

HYTHE.—Construction of four additional groynes, for the Corporation:—

Ontony, Fasey, & Son	£1,501	0	5
H. S. Chamberlain	1,494	7	8
Wallis & Co.	1,389	0	0

[Referred to engineers.]

LICHFIELD.—Additions to Children's Homes, for the Board of Guardians:—

J. R. Deacon*	£284 15

LICHFIELD.—Carrying out Watling-street sewerage scheme, for the Lichfield Rural District Council:—

M. Warrington, Hyde, Stockport*	£1,500

LONDON.—Supply of Guernsey granite setts, for the London County Council:—

	Price a ton.							Total net value of Tender.
	3,000 tons 3 in. by 6 in.	1,000 tons 3 in. by 6 in.	1,250 tons 3 in. by 6 in.	1,500 tons 3 in. by 6 in.	500 tons 4 in. by 6 in.	200 tons 4 in. by 6 in.	250 tons 4 in. by 6 in.	200 tons 4 in. by 6 in.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	£ s. d.
Enderby and Stoney Stanton Granite Co., Ltd.	38 10	38 4	39 10	38 10	36 4	37 4	36 4	36 4	15,242 18 4
A & F. Manuelle, Bishopsgate*	40 0	43 6	40 0	40 0	37 0	37 0	37 0	37 0	15,802 10 0
W. Griffiths & Co., Ltd.	40 3	43 10	41 0	41 3	37 3	38 0	38 3	38 3	16,057 5 10
Brookes, Ltd.	41 6	44 0	40 6	40 6	38 6	37 6	37 6	37 6	16,175 0 0
Fry Bros., Ltd.	42 6	46 0	42 6	42 6	39 6	39 6	39 6	39 9	16,792 10 0
J. Mowlem & Co., Ltd.	46 0	47 6	45 6	44 6	42 6	42 0	41 0	42 0	17,871 5 0

* Half the quantity accepted, to be spread over six months.

LLANBRADACH.—For sundry alterations, etc., to the Council School, for the County Council. Mr. D. Pugh-Jones, County Architect, Cardiff:—
R. Jones, Caerphilly* £200

LONDON.—For repairing the roof of the buildings at Monck-street Depôt, for the Westminster City Council:—
J. Mowlem & Co., Ltd. £163
Bingley, Son, & Follitt, Ltd.* 140

LONDON COUNTY COUNCIL.—The following tenders have been accepted by the London County Council Education Committee:—

Extending Lavatories and Bathroom at Homerton Residential School.

C. R. Price	£756 10 0
W. Silk & Son	730 0 0
W. J. Maddison	697 0 0
Lole & Co.	682 0 0
C. P. Roberts & Co., Ltd.	649 0 0
W. Reason	625 0 0
Brand, Pettit, & Co., 247, West-green-road, Tottenham*	597 0 0

Iron Staircase at same School.

Merryweather & Sons, Ltd.	£107 17 6
Safety Tread Syndicate, Ltd.	91 0 0
T. W. Vaughan & Co., Ltd.	90 0 0
General Iron Foundry Co., Ltd.	82 2 0
Carron Co.	75 7 3
H. & C. Davis & Co., Ltd.	74 15 0
F. A. Norris & Co.	74 10 0
Cadogan Iron Works	74 10 0
Hayward Bros. & Eckstein, Ltd., Union-street, Borough*	65 10 0

Heating at Bromfield-road School, Hammersmith.

B. Harlow & Son	£1,195 0 0
J. D. Boyd & Co., Ltd.	949 0 0
Brightside Foundry and Engineering Co., Ltd.	909 0 0
Yetton & Brockett, Ltd.	898 0 0
J. Biggs	850 0 0
Cannon & Hefford	839 0 0
W. Truswell & Son	829 0 0
H. J. Cash & Co., Ltd.	828 0 0
R. H. & J. Pearson, Ltd.	819 0 0
W. G. Cannon & Sons, Ltd.	815 0 0
Palowkar & Sons, 90-91, Queen-street*	[778 0 0

Heating at Netherwood-street School, Hampstead.

T. W. Vaughan & Co. (1914), Ltd.	£720 0 0
F. Davies	497 0 0
Cannon & Hefford	467 0 0
Brightside Foundry and Engineering Co., Ltd.	450 0 0
E. Deane & Beal, Ltd.	445 0 0
W. G. Cannon & Sons, Ltd.	365 0 0
R. H. & J. Pearson, Ltd.	355 0 0
Palowkar & Sons	348 0 0
Yetton & Brockett, Ltd., Munton-road, Southwark*	335 0 0

Electric Lighting Installation at Scawfell-street School, Haggerston.

G. Weston & Sons, Ltd.	£414 13 0
T. N. Kingdon & Co.	397 10 0
Lund Bros. & Co.	374 12 0
Alpha Manufacturing Co.	343 13 0
A. Hawkins & Sons	322 0 0
Johnson, O'Sullivan, & Co., Manor-parade, Church-end, Finchley*	312 13 0

LONDON.—For underpinning work at the school, Hornsey-road, for the Guardians of the Poor of St. Mary, Islington, N. Mr. Edmund I. Harrison, architect, 9, Gray's Inn-square, W.C.:—

T. Shillitoe	£224	0	0
J. R. Pitcher & Son	218	0	8
Smith & Co.	186	6	0
J. J. Powers	177	2	2
J. C. Mather	177	0	0
Stevens & Sons	175	0	0
C. W. Killingback & Co.	173	18	1
T. B. Lever & Co.	£168	4	11
Bate Bros.	167	11	5
W. S. Sharpin	162	0	0
H. & E. Lea	153	0	0
L. Lown & Co., Holloway*	152	1	0

POOLE.—Alterations to the Alderney Hospital, for the Corporation:—
J. Hillman* £3,500

PORTHCAWL (Glam.).—For the erection of a new Infants' Council School and Domestic Science Centre at Porthcawl, for the Glamorgan County Council. Mr. D. Pugh-Jones, F.S.I., County Architect, Cardiff:—
R. Jones, Caerphilly, Glam.* £2,974

READING.—Alteration to No. 13, Bridge-street, for the Corporation:—
G. S. Lewis Bros., Reading* £1,000

READING.—Alterations to "Verone," for the Corporation:—
F. T. Robinson, Reading* £348

READING.—For private street works in Warren-road, for the Corporation:—
Franks, Harris Bros., Ltd., Guildford* .. £1,534 14 4

READING.—Supplying and setting stonework for parapets of bridge at De Bohun-road, for the Corporation:—
United Stone Firms, Ltd.‡ £1,065 12 7
[‡ Recommended for acceptance.]

ROCHFORD.—Work in connection with new police station, for the Essex Standing Joint Committee:—
Myall Bros., Southend* £3,585 10

ROCHFORD.—Alteration of officer's mess-room at the Workhouse, for the Board of Guardians:—
Myall & Co.* £113

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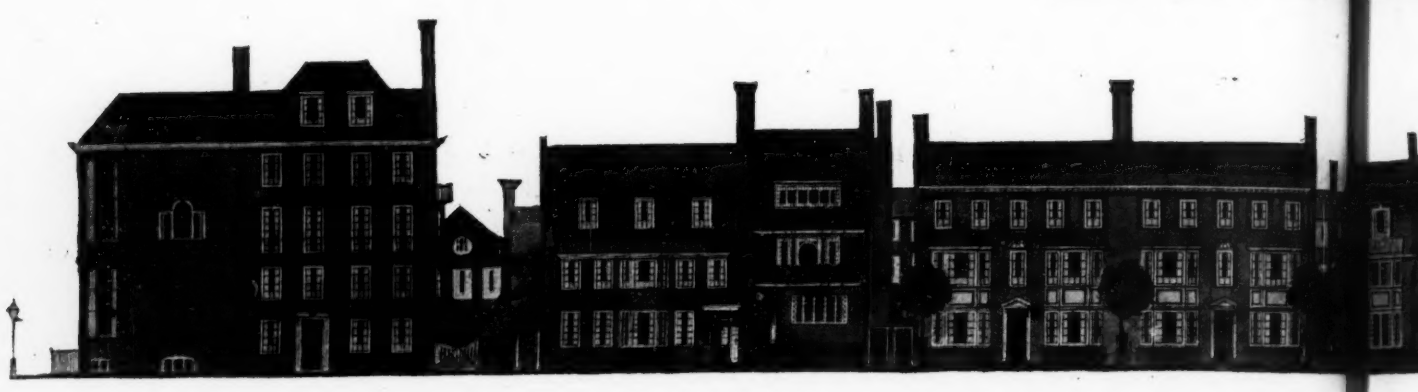

Mulb Walk

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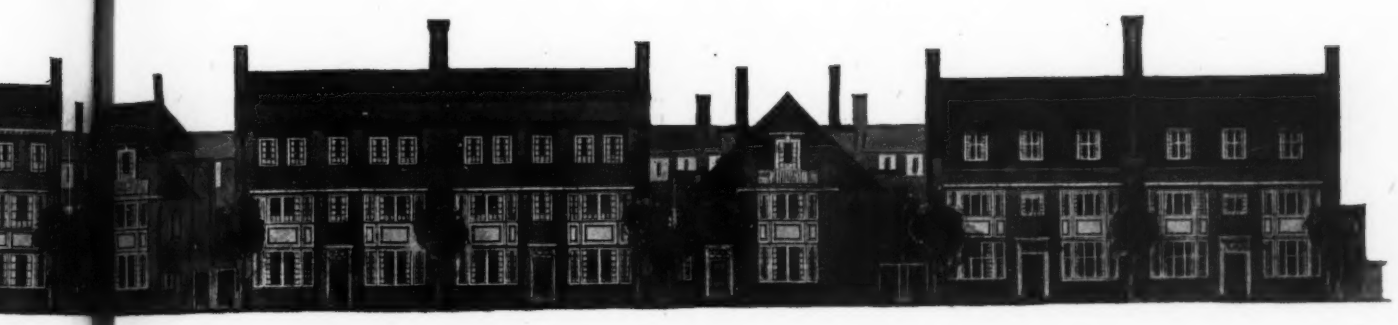

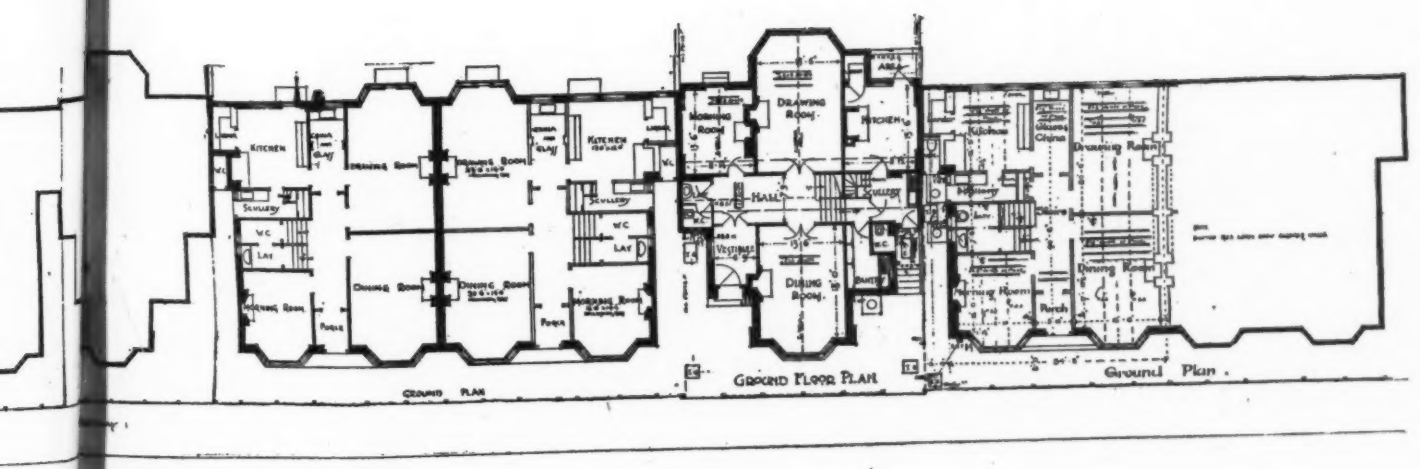

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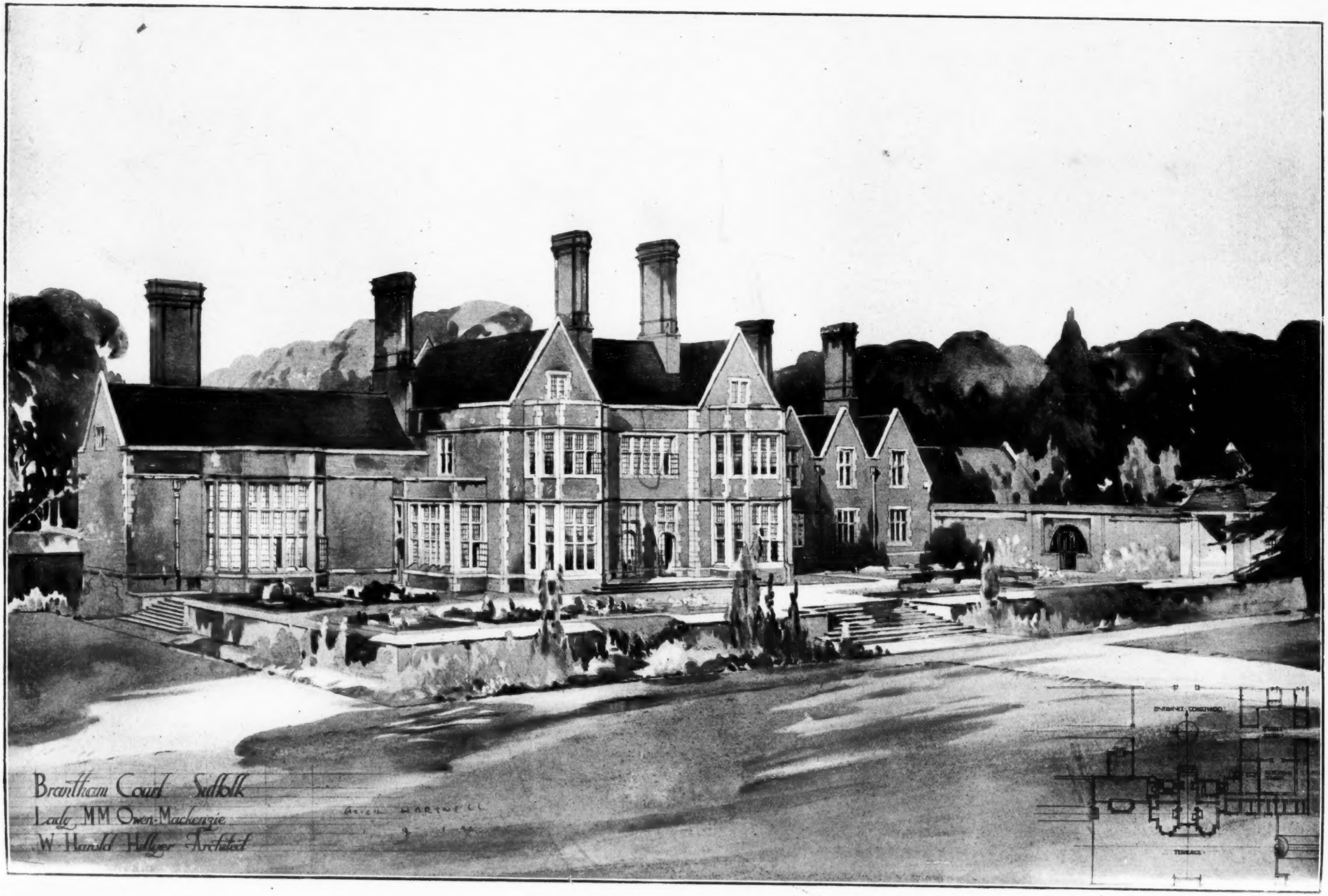
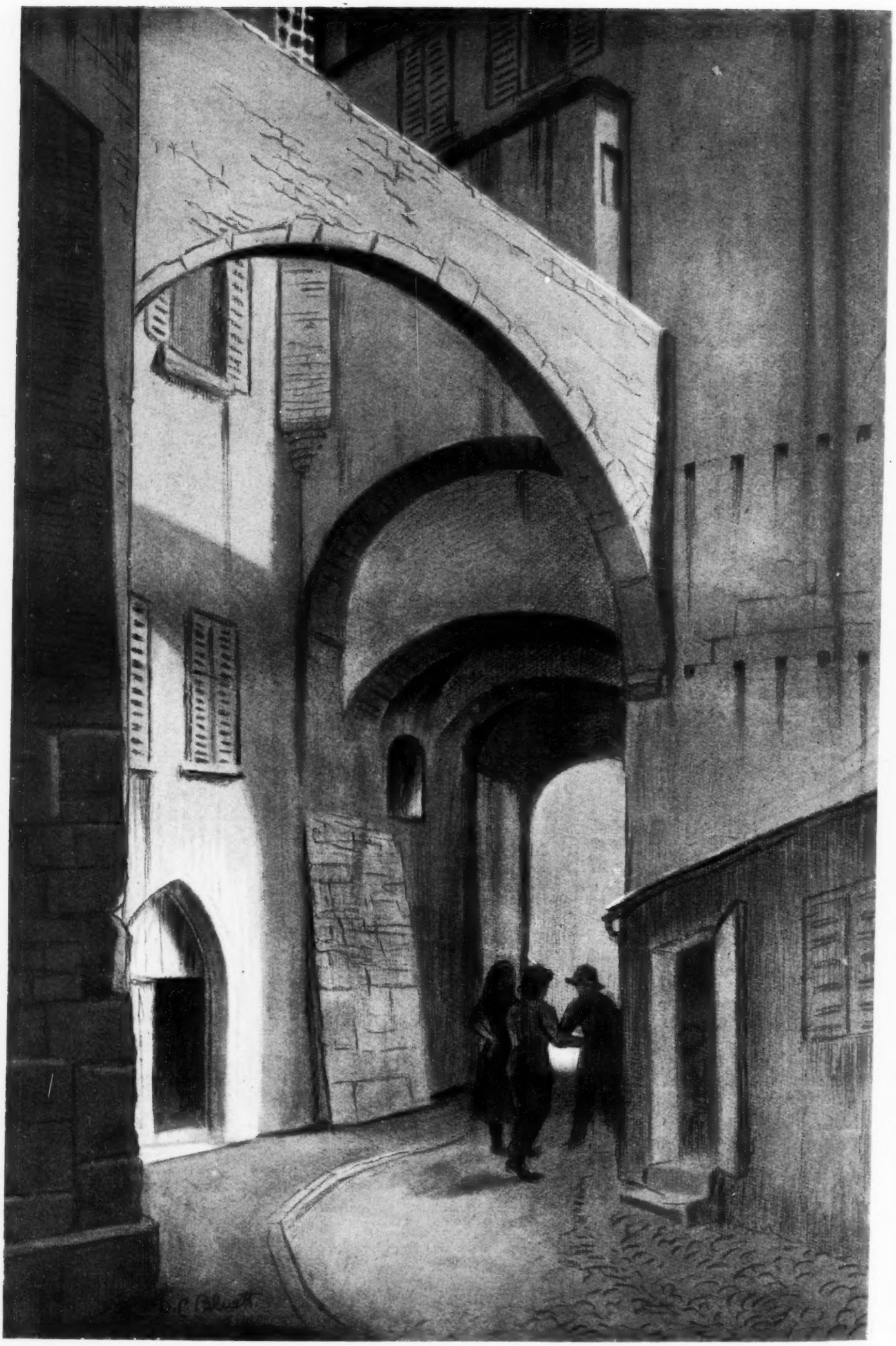


BRANTHAM COURT, SUFFOLK: SOUTH GARDEN FRONT.—Mr. W. Harold Hillyer, Architect.

BRANTHAM COURT, SUFFOLK: SOUTH GARDEN FRONT.—Mr. W. Harold Hillyer, Architect.

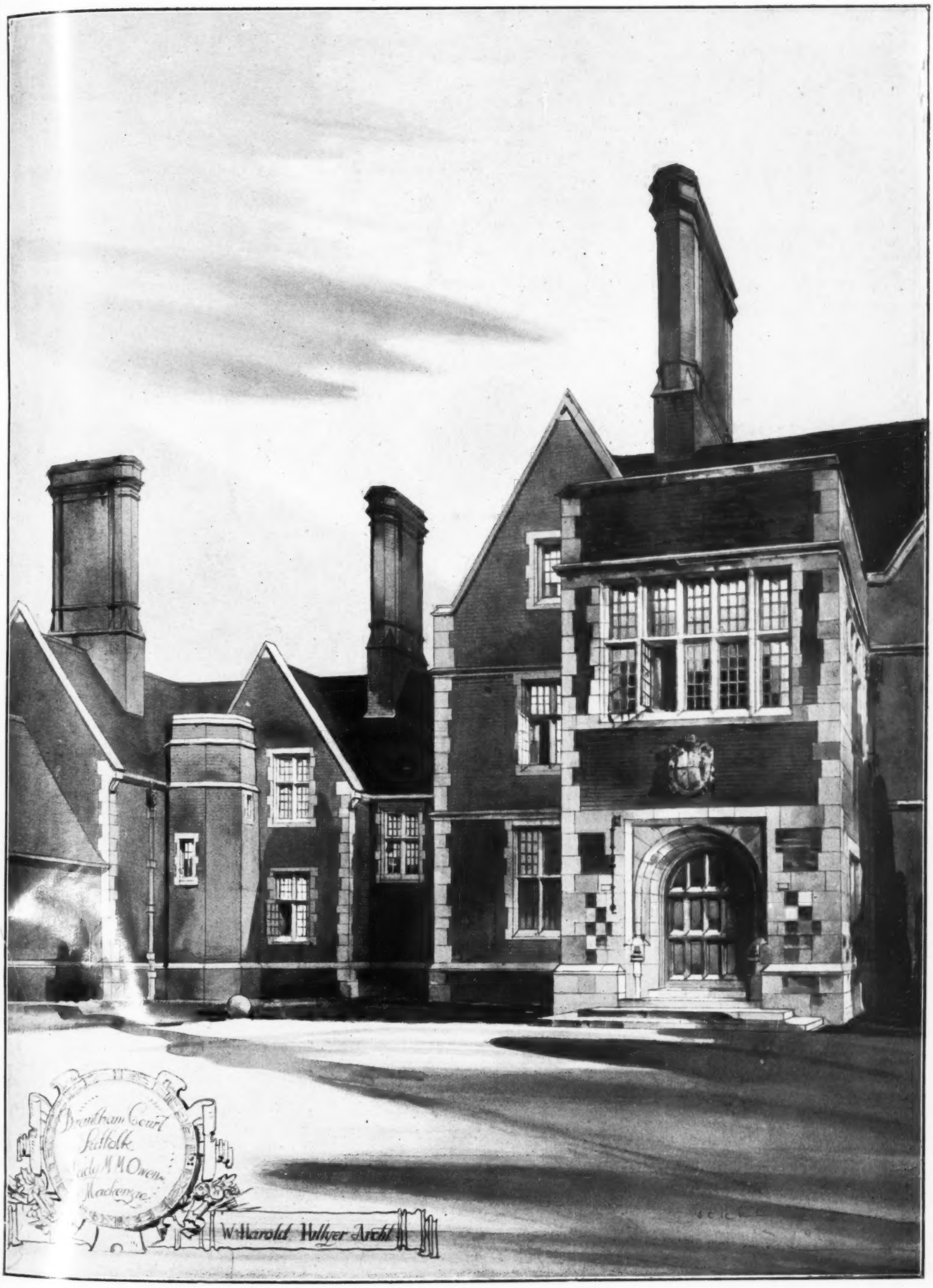


A STREET IN PERUGIA.

(From a Drawing by Mr. D. C. Bluett.)

THE AMPHITHEATRE AT ARLES.

(From a Drawing by Mr. D. C. Bluett.)



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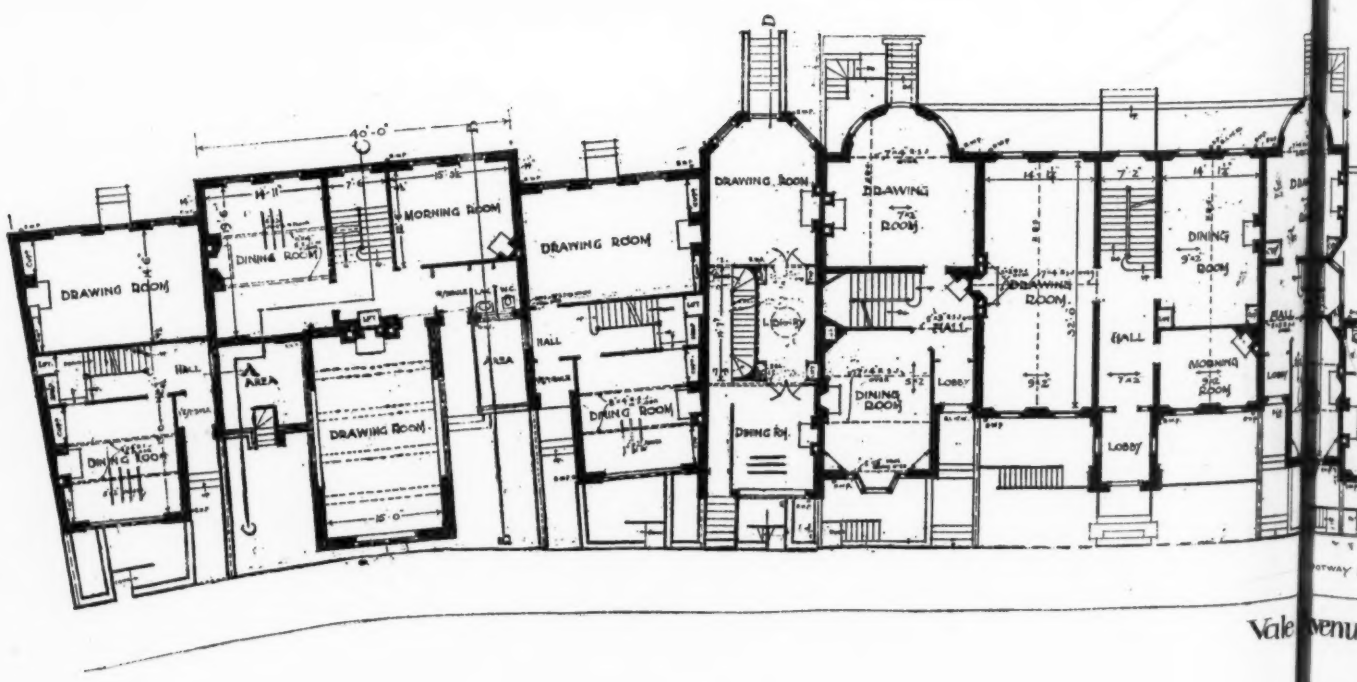

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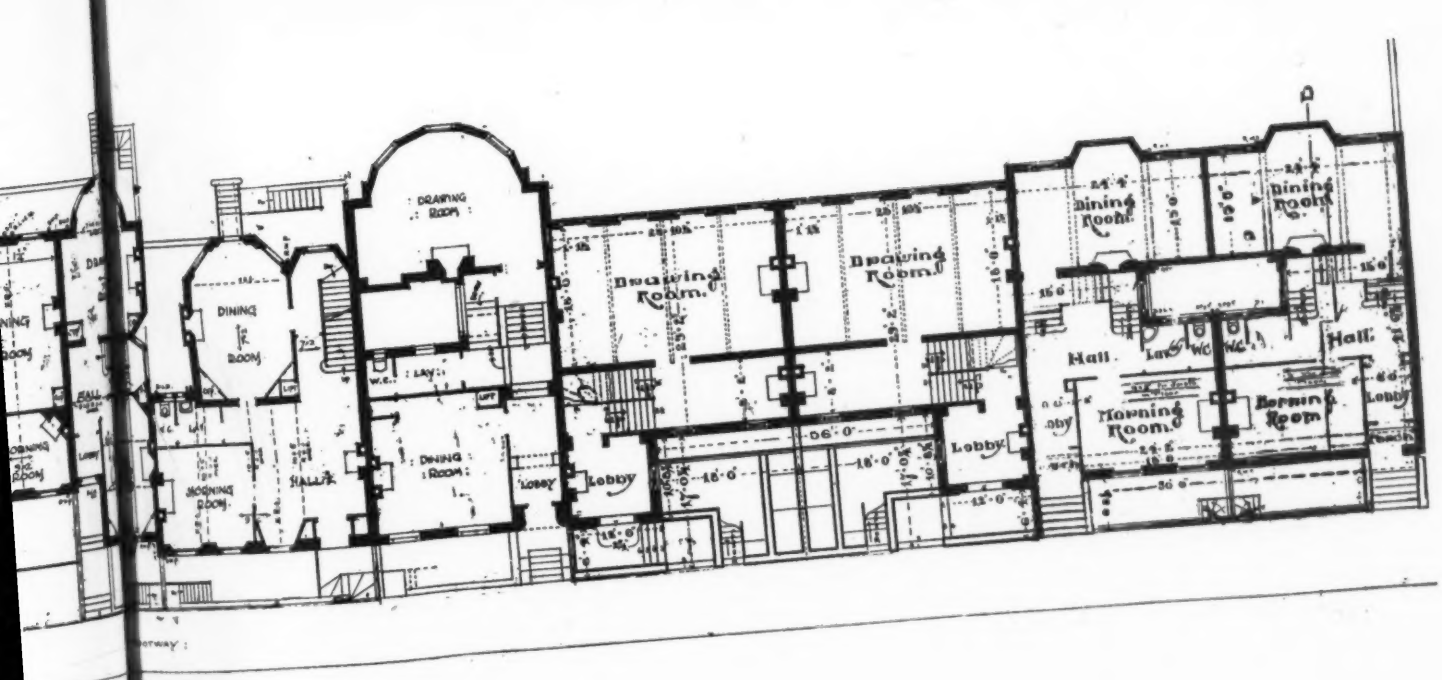

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